Index for Volume 93

AUTHOR AND SUBJECT INDEX. Pages indicating errata are in italic. S indicates June abstract supplement. Publication number P-2003-1024-01O.

Aalsburg, J., S24
Abad, J., S1, 844, S55, S84, S99, S115
Abad, P., 160
Abad, Z. G., S1, S25
Abadias, M., 436
Abawi, G. S., S14
Abbasi, P. A., 64
Abdelshife, M. A., S76
Abdul-Baki, A. A., S14
Abi Harb, K., S2
Abies fraseri, Phytophthora root rot, in plantations, S8
Abo-Elyousr, K., S2
Abou-Jawdah, Y., S2
Abu-El Samen, F. M., 293
Aceria cajani, pigeonpea sterility mosaic vector, 71
Achuo, E. A., 813
Acidovorax avenae
—on cucurbits, host specificity, S88
—on watermelon, seed infestation and role of blossoms, 528
Acosta, I. F., 88
Acremonium implicatum, in *Brachiaria* spp., seed transmission, S43
Adachi, K., S114
Adams, K., 867
Adaskaveg, J. E., 923, S21, S127, S130
Adeoti, A. A., S3
Adhikari, T. B., 959, 1158, S2
Adipala, S5
Adkins, S., S42, S115
Afanador-Kafuri, L., 579
Agama, K. K., S2
Agarkova, I. V., S2
Agindotan, B. O., S2
Agostini, J. P., S63
Agrobacterium spp.
—*A. tumefaciens*: genomics, S108; hygromycin B resistance gene transformed by, 1354; on walnut, bacteriophage for control, S22
—*A. vitis*, on tobacco and grape, hypersensitivity, quorum-sensing regulation, S33
Agroecosystem, organic and conventional, microbial community structure in soil, S53
Aguilar, J. M., 844
Aguilar, M., 976
Ahn, I.-P., 82
Ahonsi, M. O., S3
Ailanthus altissima, allelopathy, *Fusarium* as mycoherbicide, S126
Aizpún, M. T., 1553
Ajwa, H., S77
Akan, D., S51
Akimitsu, K., 768
Akinsanmi, O. A., S3
Alabouvette, C., S125
Albert, M., S48
Albugo candida, races 2 and 7, genetic and molecular analyses, 959
Alexander, B. J. R., S49, S67
Alexander, S. A., S58, S124
Alfalfa
—Fusarium crown rot, potato leafhopper injury relation, S5
—root-lesion nematode, resistance increased by oryzacystat I and II, 799
Alfano, J. R., 1274, S108, S110
Alfenas, A. C., S83
Ali, S., S3, 397
Al-Khateeb, W., S3
Allaire, M., S132
Alldredge, J. R., 805
Allen, C., S4, S30, S93
Allen, K., S114
Allen, R., S37, S88
Allium porrum, rust, inoculum density and temperature interaction, spore germination, 413
Alminaite, A., S124
Almond
—anthracnose, digital image analysis of appressoria, 923
—*Colletotrichum acutatum*, internal light spots, cover photo, August
—*Prune dwarf virus*, reverse transcription-PCR, 278
—replant disease, control, S12
—witches' broom phytoplasma, epidemic in Lebanon, S2
Alternaria spp.: on pistachio, iprodione resistance, S128; on pistachio, strobilurin resistance, point mutation, S55; on potato and tomato, different species, S27; taxonomy, restriction mapping of IGS regions, S36; toxic metabolites, in food and feed, S99
—*A. alternata*, plant–pathogen interaction, mannitol metabolism, S87
—*A. brassicae*, on horseradish, root-knot relation, Illinois, S6
—*A. brassicicola*, on crucifers, sequence analysis of ESTs in pathosystem, S62
—*A. citri*, on citrus, endopolygalacturonase gene expression, 768
—*A. dauci*, on carrot, integrated pest management, 1320
—*A. mali*, on apple, pyraclostrobin and boscalid effect, North Carolina, S54
—*A. panax*, on ginseng, protein toxin from, spore germination, 323
—*A. solani*: azoxystrobin sensitivity, S75; chlorothalonil sensitivity, S135
Aluminum, toxicity to plant pathogens, S26
Alvarez, A. M., 1124, S43
Alvarez, E., S4
Alves, E., S4
Aly, B., S6
Aly, R., S32
Amaranthus hybridus, stem disease and weevil infestation, S9
American Phytopathological Society
—annual meeting abstracts, S1
—annual report, 16
—author index to abstracts, S137
—distinguished service award, 23
—excellence in extension award, 25
—excellence in industry award, 26
—excellence in teaching award, 25
—fellows, 20
—forest pathology challenges and perspectives, 1056
—Hewitt award, 24
—international service award, 26
—Lee M. Hutchins award, 24
—Northeastern Division meeting abstracts, S132
—officers and committees, 14
—Pacific Division meeting abstracts, S127
—Potomac Division meeting abstracts, S123
—presidential address, funding shortage, 18
—Ruth Allen award, 23
—symposium: forest diseases and management policy, 1041; forest pathology concepts, evolution, 1052; forest pathology in North America, 20th century, 1039; forest pathology, overview, 1037; Fusarium rust in pine, disease management, 1048; Melhus student, 751; white pine blister rust, prognosis, 1044
—Syngenta award, 27
Ammar, E. D., S84
Amorim, L., 502
Amrine, J. W., Jr., S124
Anair, R. A., Jr., S132
Anchieta, A. G., S101
Andersen, P. C., S50
Anderson, J. B., S39
Anderson, J. M., 1158, 1386
Anderson, R. L., 1041
Anderson, T., S6, S62
Andrews, J. H., S60, S91, S106
Andrie, R. M., S4
Angeles, E. R., 147
Annis, S. L., S4, S70
Antonioli, R., S54
Aphanomyces cochlioides, oospore survival, solarized soils, S90
Appel, D. N., S102
Apple
—blue mold decay, biocontrol, S40
—*Colletotrichum* and *Glomerella* spp., species characterization, S30
—disease management, organic alternative, S8
—DNA array diagnostic system, S66
—fire blight: prediction system in Georgia, S11; resistance and rootstock effects, S40
—gray mold, biocontrol with *Pichia anomala*, 1145
—gray and blue mold, biocontrol, postharvest, S80
—postharvest decay: biocontrol yeasts and oxidative stress, 564; *Candida saitoana* for control, 344; *Candida sake* treatment, 436; control by heat treatment, biocontrol, and sodium bicarbonate, S50; fungus virulence factors, S105
—powdery mildew, fungicides for, S79
—scab: cultivar susceptibility and inocolum source, S41; field resistance, mapping, 493; resistance induced by chitinases, 1496
—sooty blotch, agar media, S86
—sooty blotch and flyspeck: disease-warning system in Illinois, S5; inoculation timing in Iowa, S7; postharvest removal by chemicals, S35
Arabidopsis sp.: disease resistance, polymorphism pattern, S83; nematode association, phosphoglycerate and auxin, S59; pathogen resistent gene construct, putative self-processing, S52; *Pseudomonas syringae*, expression profiling, accuracy, S110; *RPP7* resistance pathway, molecular genetic dissection, S89
—*A. thaliana*: broomrape, defense gene expression analysis, 451; plant-nematode interaction, cell promoter, S81
Arachis hypogaea, genomics, EST technology, S55
Aranda, M. A., 844
Arcinas, A., S4
Ardales, E. Y., S94
Ariss, J. J., S5
Aritua, V., S5
Ariyo, O. A., S5

Armentrout, D. K., S17
Armillaria spp.: North American species, sequence analysis and spacer regions 1 and 2, S12; on peach, using FAME profiling, S18; phylogenetic relations, ribosomal DNA sequence, S33; in red pine sites, understory, S47
—*A. ostoyae*, variation in western USA, S33
Arnason, J. T., 712, S97
Arnould, C., 966
Arpaia, M. L., S57
Arseniuk, E., S124
Arterburn, M., S50
Arul, J., S85
Ascochyta rabiei, on chickpea, virulence assay, S16
Ascomycete, speciation, distribution and host specialization, S98
Asensio, C., 1553
Asensio-S.-Manzanera, M. C., 1553
Ashley, R., S60
Asparagus, Fusarium crown and root rot, NaCl and rhizobacteria, 186
Aspergillus spp.: mycotoxin production, RNAi-based control, S33; volatile metabolites, S42
—*A. caelatus*, vegetative compatibility group, DNA fingerprinting, S59
—*A. flavus*: aflatoxin biosynthesis, modulator, S24; airborne in desert, devices, S9; on cotton, Texas, S39; on peanut, trypsin inhibitor, chitinase, and beta-glucanase, S52; vegetative compatibility analysis, medium effect, S18; xylanase, purification and characterization, S60
—*A. giganteus*, *Botrytis cinerea* affected by, protein from, 1344
Assis Filho, F. M., S5, S64
Astua-Monge, G., S5, S82
Atiri, G. I., S5
Aureobasidium pullulans, on apple, phylloplane, S60
Avila, F. J., S5
Avocado, postharvest pathogens, thermal conditioning for treatment, S57
Ayoubi, P., S86

Babadoost, M., S5, S6, S39, S83, S84
Bacillus spp.: biocontrol agent, formulation, S117; biocontrol agent, IPM systems, S117; commercial application, S117; ecology in agricultural systems, S117; host defense and plant growth promotion, S117; spore assembly and function, S117; taxonomy, aerobic endospores, S117
—*B. mycoides*, hypersensitivity relation, independent oxidative burst, S7
Backhouse, D., S3
Backman, P. A., S6
Backus, E. A., S6
Bacon, C. W., S6, S29
Bacon, R., S6, S132
Bacteria
—biofilms, on sprout surfaces, laser microscopy, S26
—on nematodes, evolution of parasitism, S108
—potato, oligonucleotide array for identification, 262
—type III protein secretion, strategy in plant and animal hosts, S108
Bae, J. J., S15
Baierl, A., 657
Bailey, B. A., S10, S27
Bailey, W. D., S6
Baird, R., S68
Bakan, B., 712, S97
Baker, C. J., 1274
Bakker, P. A. H. M., 626, 813
Bakkeren, G., 167
Balaji, B., 1386
Baldini, R., S107
Ball, D. A., S129
Balogh, B., S62
Banana
—nematodes and endophytic fungi, S96
—Septoria leaf spot, in Hawaii, S130
Band, M., S51
Bandla, M., S9, S34, S57
Bandyopadhyay, R., S65
Banerjee, M. K., 1485
Banko, T. J., S123
Bao, J., S27
Barak, J. D., 596
Barakat, M., 1505
Baraoidan, M., S57
Barasubiye, T., S6
Barbara, D. J., 364
Barbetti, M. J., 1073
Bar-Eyal, M.,127
Barg, E., S5
Bargabus, R. L., S7
Barley
—bymoviruses, recent in Korea, S38
—diseases and direct seeding, S77
—leaf rust, molecular mapping of resistance gene, 604
—powdery mildew: acibenzolar-S-methyl and ethirimol effect on, 305; disease resistance signal, S32; durable resistance and the mlo gene, S112
—soilborne pathogens, survey in Idaho, S81
Barley stripe mosaic virus, nucleotide substitutions, S75
Barley yellow dwarf virus
—on cereals, yield loss prediction, aphid abundance, 1217
—*cereal yellow dwarf virus* comparison, detection tests and vectors, S9
—quantification with PCR, 1386
Barley yellow mosaic virus, linkage analysis, resistance screening, in Korea, S38
Barnes, C. W., S82
Barnes, S. E., 573
Barnett, M. J., S108
Baron, J. J., S11
Barrera, O., S6
Barreto, D., S71
Barrett, T. L., S7
Bartels, D., S84
Barthe, G. A., S20
Bartz, J. A., S56
Bassanezi, R. B., 502
Bastien, C., 421
Battilani, P., S99
Batzer, J. C., S7, S35, S86
Bau, H.-J., 112
Baudoin, A., S7, S124
Baum, T. J., S21, S23, S28, S53 S59, S88, S91
Bausher, M., S55
Bayles, M. B., S7
Bean (see also *Phaseolus* spp.)
—disease resistance genes, deployment, S70
—viruses, spatial pattern in New York, S78
Bean common mosaic necrosis virus
—Host Group 3, NL-3 K strain, 683, S81
—resistance screening method, 1430
Bean common mosaic virus, *Bean common mosaic necrosis virus*, recombination event, S48
Bean pod mottle virus
—foliar insecticide timing, S95
—reassortant isolate, interstrain recombinant, S94
—on soybean: early and late inoculation comparison, S73; hilum bleeding symptom, S68; seed coat mottling, S56
Bean and sugar beet, wheat as alternate hosts for pathogens, in Nebraska, S34
Beanland, L., S7
Beasley, J. P., S10
Beattie, G. A., S106
Beaver, J., S75
Becerra, V. V., S56
Becker, J. O., 1006, S67, S128, S129
Becktell, M. C., S7
Bedford, K. E., S66
Beebe, S., 88
Beet curly top virus, on chile pepper and weeds, in New Mexico, S37
Beet mild curly top virus, movement rate in beet leafhopper, 478
Beet necrotic yellow vein virus
—pathotypes in California, S54
—on sugar beet, remote detection, 720
Beet pseudoyellows virus, on strawberry, new, S85
Begomoviruses
—bipartite, genome size and DNA movement, S109
—detection in plant extracts, comparison of techniques, 1153
—diversification in world, mechanisms, S101
—field populations in Pakistan, *Bemisia tabaci* genetics, 1422
—gene silencing and host factors, S109
—host-whitefly co-evolution, S99
—interactions between, S109
Beitia, F., 1422
Bélanger, R. R., 402, 535, S74, S132, S133
Belfon, R., S7
Bell, A. A., S7
Belmar-Díaz, C., S25
Belonolaimus longicaudatus, embryogenesis, thermal time, S128
Bemisia tabaci, begomovirus vector, genetics, Pakistan, 1422
Bender, C. L., S86
Bengough, A. G., 1111
Benhamou, N., 402, 535, 1308, S74
Bennett, M. A., S91
Ben-Noon, E., 1320
Benson, D. M., 1115, S8, S26, S38, S118
Bent, A. F., S110
Bentley, T. C., S112
Berbee, M. L., S98
Beretta, M. J., S20
Berg, M., 1233
Bergamin Filho, A., 502
Bergdahl, D. R., S133, S134, S135
Bergelson, J., S83
Berger, P. H., S2, S24, S52, S78
Bergfeld, S., S130
Bergstrom, G. C., 1131, S13, S77
Berkett, L., S8
Berland, P. A., S8
Berner, D. K., S3, S10
Bernier, L., S41, S132, S134, S135, S136
Berry, S. A., S73
Bertagnolli, P. F., S103
Bertolini, E. 286
Bertrand, P., S58
Besler, B. A., S60
Best, V. M., S87
Betula papyrifera, ectomycorrhizae, soil type and management effect, S48
Beveridge, T., S79
Bextine, B. R., S8
Beyl, C. A., S68
Bhat, R. G., S8, S127, S131
Bhattacharyya, M. K., S40
Biggs, A. R., S20
Bilodeau, G., S8

Bily, A. C., S97, 712
Biodiversity
—agricultural systems, general and specific, S100
—plant pathogens, obstacles and opportunities, S100
Biological control
—apple gray mold, yeast, 1145
—bacteria in wheat rhizosphere, strain interactions, 982
—*Botrytis* and *Penicillium* on stored apples, resistance, 564
—*Candida saitoana* for apple fruit decay, postharvest, 344
—*Candida sake* for apple postharvest diseases, 436
—*Clonostachys rosea* for pea root rot complex, 329
—composted potting mix for *Rhizoctonia solani* on impatiens, 1115
—GFP reporter genes for study, S104
—*Lysobacter enzymogenes* for *Bipolaris sorokiniana* on tall fescue, 1103
—nematode-trapping fungi and correlation with most probable number, 1599
—production and delivery of agent, assay, S79
—*Pseudomonas fluorescens* for pear fire blight, 727
—*Pseudomonas putida* for Fusarium wilt of radish, 626
—*Pseudomonas* spp. for take-all decline in wheat, 54
—rhizobacteria for *Cucumber mosaic virus* on tomato, 1301
—risk assessment, ecological approach, S104
—soilborne pathogens, vegetables and wheat, S125
Biopesticide, risk assessment, monitoring agents, S45
Biosca, E. G., 485
Biotechnology
—biosafety issues, Africa, S111
—disease control in developing countries, S110
—intellectual property issues, developing countries, S111
Bioterrorism
—agricultural systems, genetic/molecular modification, S100
—detection on plant surfaces, QPCR and TRFLP, S71
—pathogen spread, S100
—wild cereal species, genetic diversity, S100
Bird, D. M., S108
Bird, J., 774
Bisaro, V., 136
Biswas, K. K., S8
Black, M. C., 1368
Blackberry, chlorotic line pattern, crinivirus association, S85
Blanchette, R. A., S47
Blanco-Labra, A., 917
Blee, K. A., S10
Blein, J.-P., 1308
Bliss, W. O., S9
Blodgett, A. B., S50
Blodgett, J. T., S9
Blueberry
—cultural practice and disease, in Maine, S4
—Godronia canker, S35
—mummy disease, leaf bud phenology, S70
—resistance genes, degenerate primers, S72
Bluhm, B. H., S9
Blum, K., S9
Blumeria graminis
—on barley, acibenzolar-S-methyl and ethirimol effect, 305
—on wheat, silicon effect on resistance, cytology, 402
Blunt, T. D., S127
Boal, R. J., S92
Bobrova, V. K., S9
Bock, C. H., S9, S10, S70, S88
Bockus, W. W., S4
Boehm, M. J., S17, S41, S83, S94
Boer, Y., 1360
Boland, G. J., 1407, S14
Bom, P., 626
Bonde, M. R., S10, S102
Bonello, P., S9, S48, S55
Bonman, J. M., S113
Boosalis, M. G., S26
Boozer, R. T., S76
Borja, M., 1344
Borneman, J., 1006, S67
Bosselut, N., 160
Bostock, R. M., S121
Botryosphaeria dothidea, on pistachio, spatiotemporal genetic structure, in California, S128
Botrytis spp.
—*B. cinerea*: *Aspergillus giganteus* protein effect on, 1344; disinfestants, dose curves, S17; on grape, defense reaction and latency, 316; on grape, resistance correlations, 1263; on pomegranate, fungicide management, S127; on primula, latent disease spread, 573; on raspberry, fungicides, S127
—*B. fabae*, on bean, phytoalexin and peroxidase activity, S48
Bottalico, A., S98
Bottner, K. D., 1368, S49
Bouchara, J.-P., 1023
Boudon-Padieu, E., 1308
Boudreau, M. A., S10
Boul, R. B., S10
Boulanger, R., S85
Boule, J., S79
Boulé, N. A., S132
Bourassa, M., S132
Bousset, L., 305
Bouterige, S., 1023
Bové, J. M., 502
Bowden, R. L., 874, S18, S19
Bowen, K. L., S10, S64
Bowers, J. H., S10, S20
Bowers, T. A., S10
Boyhan, G. E., S77
Bozarth, R. F., S63
Bradley, C. A., S10, S81
Bradshaw, T. L., S8
Brain, P., 657
Brandl, M. T., S105
Brannen, P. M., S11, S25
Brantner, J. R., S90
Brasier, C. M., S98, S106
Brassica spp., black spot, model pathosystem, S18
—*B. juncea*, soilborne pathogens inhibited by, S11
—*B. napus*, light leaf spot, epidemic in United Kingdom, spatial aspects, 657
Braun, P. G., S11
Braverman, M. P., S11
Bredehoeft, M., S81
Breeden, T. S., S11
Brenneman, T. B., S11, S44, S123, S125
Brenneria quercina
—on *Quercus ilex*, cankers, cover photo, April
—on *Quercus* spp., characterization in Spain, 485
Breuil, C., S134
Brevipalpus sp., rhabdo-like virus transmitted by, diagnosis, S54
Brewer, M. T., S11
Brey, C. W., S103
Bristow, P. R., S127
Britton, K. O., S34
Brlansky, R., S19, S30, S57, S63, S75
Brodhagen, M., S11, S72
Bronson, J. J., S12
Brooks, R. A., S71
Brouwer, M., S52
Brown, D., S12, S22, S30, S83
Brown, J. E., S81
Brown, J. K., 774, S38, S99, S101
Brown, K. M., S45
Brown, L. G., S12, S41
Brown, M. R., S10
Brown, R. L., S12
Brown, S. E., S39
Brown, S. L., S115
Brown, W. M., S127, S130
Browne, G. T., S8, S12, S77
Brown-Guedira, G. L., 784
Browning, H. W., S101
Browning, M., S12
Brucella sp., comparative and functional genomics, plant and animal similarity, S107
Bruck, R. I., S10
Bruckart, W. L., III, S123
Bruton, B. D., 1233, 1240, S90, S94
Bryan, G. T., 1452
Bryson, P. K., S12
Buchenauer, H., S90
Bucholtz, D. B., 1386
Buck, C., S31
Buck, J. W., S63, S118
Budding, D. J., 666
Buell, C. R., S108
Buell, R., S110
Bukhalid, R. A., S44
Bull, C. T., S12, S29
Bulluck, L. R., III, S130
Bulluck, R., S41
Burbidge, J., S67
Burdsall, H. H., Jr., S119
Burke-Scoll, K., S76
Burkholderia cepacia
—on onion, populations, organic soil and other crops, S34
—in organic soil, populations and pathogenicity, S133
Burmester, C., S38
Burr, J. A., S90, S91
Burr, T. J., S33
Burrows, P. M., 127
Bursaphelenchus xylophilus, on pine, abamectin treatment, S39
Burt, A. J., 712
Busboom, K. N., S13
Butternut
—canker, conidiospores on beetle vectors, S135
—curculios, wounds, S133
Butterworth, S. C., S76
Buyer, J. S., S14, S125
Byrd, G., S12

Cabbage, leaf curl, mixed infection with virus, Jamaica, S75
Cadena-Hinojosa, M., S25
Cadet, P., 1437
Cadle-Davidson, L., 1137, S13
Cadle-Davidson, M., S13
Caemorhabditix elegans, bacterial artificial chromosome libraries, S59
Cai, G., 1014, S13
Cajanus cajan, sterility mosaic disease, mite transmission, 71
Caldwell, W. D., S104
Callahan, A. M., 349

Callahan, S. D., S74
Calla lily, methyl bromide for, alternative treatment, S29
Cambra, M., 286
Cameron, K. D., S13, S44
Cammue, B. P. A., S52
Campaña, A., S13
Campbell, K. W., S46
Campbell, L. H., S32
Candida spp.
—*C. saitoana*, apple fruit decay controlled by, postharvest, 344
—*C. sake*, biocontrol agent, apple postharvest, 436
Candidatus Phlomobacter fragariae, planthopper vector, 644
Candole, B. L., S13
Canola, blackleg sporacle, model for predicting ascospore showers, 1073
Cantoral, J. M., S14
Capsicum annuum
—anthracnose, calcium/calmodulin-dependent signaling, prepenetration, 82
—thrip resistance, *Tomato spotted wilt virus* spread restriction, 1223
—*Tomato spotted wilt virus*, thrips resistance, 96
—*Xanthomonas campestris*, race 3, bacteriocin-like substances, 1415
Caputo, L., 564
Carbu, M., S14
Cardwell, K. F., S116
Carisse, O., S6, S14, S41, S132
Carlson, R. W., S34
Carpenter, J., S14, S37
Carpenter-Boggs, L., S89
Carrera, L. M., S14
Carriquiry, A. L., 758
Carris, L., S73, S89
Carroll, J. E., 1137, S14
Carrot
—Alternaria leaf blight, integrated pest management, 1320
—cavity spot, *Pythium* spp. in Quebec, S132
—foliar blight, fungicide and disease forecaster, S22
—leaf blight, IPM management program, in New York, S14
—pesticides for, production system, S74
Carta, L. K., S2, S61
Carter, E. A., S35
Cartinbour, S., S110
Cartwright, R., S3, S40
Caruso, F. L., S14
Carvalho, S. A., S5
Cassava
—bacterial blight, marker detection in Colombia, S4
—mosaic: biotechnology in tropical agriculture, S110; screening genotypes, S5
—phytoplasm-frogskin disease, detection, S4
Castagnone, C., 160
Castillo, P., 1093, 1513
Castoria, R., 564
Castro, A. C., 528, S60, S88
Catal, M. C., S76
Catharanthus roseus
—Phytophthora blight, phosphite foliar sprays, S123
—vinca virescence, gene expression, S84
Catlin, N. J., S14
Cavin, C. A., S123
Celetti, M. J., S14
Cenis, J. L., 1422
Cephalosporium spp.
—*C. gramineum*, on wheat, detection with PCR, S87
—*C. maydis*, diversity and amplified fragment length polymorphism, Egypt, 853
Ceratocystis spp.
—*C. fimbriata*: host specialization, in Brazil, S83; Latin American clade, variability and host specialization, 1274
—*C. resinifera*, genetic variability, Canadian population, S134
Cercospora spp., on sugar beet, leafspot prediction model, S44
—*C. arahidicola*, on peanut, pyraclostrobin effect on germination, S54
—*C. beticola*, on sugar beet, conidial dispersal, S44
—*C. kikuchii*, vegetative compatibility groups, S13
—*C. zeae-maydis*: on maize, cercosporin and pathogenesis, kinase homolog, S78; microcycle conidiation, 193 stromata, increase on corn residue, S26
Cereal yellow dwarf virus, quantification with PCR, 1386
Ceresini, P. C., 610, S25
Ceri, H., S57
Cha, B. J., S42
Chabane, K., S92
Chaetocnema pulicaria, on corn, Stewart's disease vector, beetle infections, 210
Chakraborty, S., 176, 1485, S3
Chalara elegans, mitovirus in, molecular characterization, S69
Chan, Y.-K., S15
Chancey, S. T., S108
Chandok, M. R., S15
Chandrika, R., S15, S57, S86
Chang, C. J., S76
Chang, T. H., S15
Charchar, M. J. d'A., 176
Charkowski, A. O., S67, S93
Charudattan, R., S15, S63, S75, S92
Chase, T. E., S15, S94
Chastagner, G. A., S128
Chatterjee, A. K., S110
Chen, C. S., S15
Chen, H., S16, S83
Chen, J., S16
Chen, K. C., S15
Chen, P., S14, S95
Chen, S. (Nebraska), S105
Chen, S. Y. (Minnesota), S16, S123
Chen, W., S16
Chen, X. M., S16, S42
Chen, Y. C., S15
Chen, Z.-Y., S12
Chenault, K. D., S16
Cheng, Y.-H., 112
Cheng, Z.-M., S88
Chevalier, M., 1496
Chevreau, E., 1496
Choi, J. J., S16, S46, S55, S108
Choueiri, E., S2
Christ, B. J., S135
Christianson, T., S65
Chun, W. C., S73
Chung, K. R., S17
Ciampi, M. B., S25
Cianzio, S. R., S66
Cicer arietinum, *Fusarium* and root-knot interactions, 1513
Ciomperlik, M., S84
Circulifer tenellus, *Beet mild curly top virus* vector, virus movement in vector, 478
Citovsky, V., S109
Citrus
—Alternaria black rot, postharvest fruit disease, endopolygalacturonase gene expression, 768
—canker: detection in field, S59; detection at port facilities, S76; disease in tissues, 832; genetically engineered resistance, S15; law and science conflicts, S121; science/legal conflicts, S120; wind dispersal of bacteria, S9
—exotic pathogens, Florida, S101
—greasy spot, ascospore release and dispersal factors, 1031
—postbloom fruit drop, fungicides, Brazil, S70
—postharvest decay, thiabendazole and sodium bicarbonate, S105
—postharvest disease control: azoxystrobin, S17; fludioxonil, S17, S94
—sudden death: haplotypes, gene analysis, S82; spatial and temporal analyses and etiology, 502
—*Xylella fastidiosa*, geographic genetic structure, Brazil, 28
Citrus leprosis virus, in Panama, characterization, S30
Citrus psorosis virus, natural spread in Texas, S61
Citrus tristeza virus
—antibody development, S86
—aphids and genetic diversity, evolution, S99
—in citrus roots, sudden death relation, S20
—genotypes, India, S75
—new genotypes, heteroduplex mobility assay, S57
—population diversity, strains for cross-protection, S8
—primers for cloning of genome, S35
—in transgenic grapefruit, pokeweed antiviral protein, S71
Ciuffetti, L. M., S4
Ciufo, S., S134
Civerolo, E., S16, S84
Cladosporium carpophilum: on peach, conidial production, seasonal, S76; on peach, moisture sources, conidial dissemination and infection, 1581
Claeys, D., S20
Clarke, B. B., S18, S29, S112
Clarke, C. T., S41
Clavibacter michiganensis
—biofilm evaluation, S57
—genome sequencing project, S39
—on tomato seed, survival, S43
Claviceps purpurea, host range in California coasts, S26
Clayton, M. K., 1082
Cleere, S., S67
Cleveland, T. E., S12
Clifford, J. M., S133
Climatology, disease occurrence and geographical patterns, S51
Clonostachys rosea, pea root rot controlled by, 329
Clough, S. J., S17
Cloutier, J.-S., S133
Coakley, S. M., 751
Cobb, B., S120
Cober, E., S6
Cochran, A., S17
Coconut, lethal yellowing phytoplasma, carbohydrate metabolism, 976
Coffee, wilt, in Uganda, S50
Coffman, V. A., S30
Cohen, S. D., S119
Cohn, D. R., S123
Colburn, G. C., S17
Cole, C., S17
Cole, F. M., 316
Coletta-Filho, H. D., 28
Colletotrichum spp.: on mango, survey in Puerto Rico and Florida, S74; on Russian thistle, biocontrol in Hungary, S123; on strawberry,

genetic diversity and pathogen variability, 219; on tamarillo, passiflora, and mango, isolate characterization in Colombia, 579
—*C. acutatum*: on almond, appressoria, digital image analysis, 923; on almond, infection process, S21; on blueberry, infection, S90; on citrus, indole derivatives, S17; endo-polygalacturonases, cloning, S69; on highbush blueberry, dormant infection, S20; on strawberry, fungicide dip treatments, S34; on strawberry, fungicides and latent colonization, S61; on strawberry, plant extract effect on conidia, 1285; on strawberry, temperature and wetness duration effect, conidia and appressoria, 513
—*C. coccodes*, vegetative compatibility groups, on potato in North America, S66
—*C. gloeosporioides*: pectate lyase secretion, factors, S105; on pepper, calcium/calmodulin-dependent signaling, prepenetration, 82; on *Stylosanthes* spp., genetic diversity and centers of origin, 176
—*C. graminicola*: biology and genetics, S111; spore dimorphism, S87; on turfgrass, fungicide resistance, biology, S18; on turfgrass, pathogenicity and host specificity, S112; on turfgrass, thiophanate-methyl, resistance, California, S91; on turfgrass, transposon fingerprint profiles, S29; on turfgrass, vegetative compatibility, intron sequence analysis, S112
—*C. sublineolum*, on sorghum, temporal and spatial development, S52
Collins, A. (U.K.), 364
Collins, A. A. (Delaware), S17
Collins, D. J., S17, S81
Collmer, A., S108, S110
Colon, L. T., 666
Colowit, P. M., S8
Colyer, P. D., S104
Coniothyrium minitans, biocontrol of Sclerotinia blight on peanut, S70
Connell, J. H., S12
Converse, R. H., 380
Conway, W. S., S50, S69, S105
Cook, M. J., S77
Cooke, D. E. L., S98
Cooke, P. H., S26
Coops, N., 1524
Copes, W. E., S17
Coplin, D. L., S32, S61
Core, A. B., S17
Corn (see also Maize)
—Aspergillus ear rot, resistance source, S13
—fumonisin in grain, seed treatment, S46
—Fusarium ear rot and fumonisin, hybrid evaluation, S46
—gray leaf spot, microcycle conidiation of *Cercospora zeae-maydis*, 193
—hydrophobic amylase inhibitor, active against *Fusarium*, 917.
—root-knot nematode, root border cell presence, activity, 1111
—silage, mycotoxins, S97, S98
—stalk rot, insects and diseases of, treatment evaluation, S46
—Stewart's disease: flea beetle populations, 210; vector control, S61
—sweet, high plains disease, seed transmission, S127
Cornelissen, B. J. C., 1360
Cornus spp. (see also Dogwood)
—*C. florida*, powdery mildew, resistance and PR-10 protein, S5
—*C. mas*, bacterial blight, control, S66
Correa-Victoria, F. J., S18, S54
Correll, J. C., S30, S87, S112
Costamilan, L. M., S103
Cotterill, P. J., 752
Cotton
—aldicarb breakdown, in Alabama, S38
—bacterial blight resistance, near-isogenic lines, S7
—bronze wilt, environment protocol, S7
—commercial seed, aflatoxin contamination in Texas, 1190
—damping-off, biocontrol using pathogen germination inducers, S37
—nematodes, messenger, EBC-583, and plant growth, S46
—reniform nematode, site specific management, S48
—transgenic cultivars, root-knot reproduction and severity, S104
—*Xanthomonas campestris*, phyllosphere inoculation technique, 1204
Cotty, P. J., 1190, S9, S18, S39, S60
Counce, P. A., S49, S79
Cousin, M. A., S9
Cover photo
—almond, *Colletotrichum acutatum*, internal light spots, August
—*Brenneria quercina*, on *Quercus ilex*, cankers, April
—*Cucurbit yellow stunting disorder virus*, in *Cucumis melo*, RNA detection, July
—maize, trichome, microcycle conidiation, February
—*Meloidogyne artiellia*, on chickpea roots, December
—*Meloidogyne incognita*, on maize root, September
—*Monilinia fructicola*, on canned peaches, November
—*Papaya ringspot virus*, resistance to geographic strains, January
—rice: *Magnaporthe grisea* on, mesophyll cell, May; sheath blight, stem lesions, March
—*Xanthomonas campestris*, on cotton leaves, October
—*Xylella fastidiosa*, fimbriae produced by, June
Covert, S. F., S41, S134
Cox, C. M., S18
Cox, K. D., S18
Coyne, C., S16
Cram, M. M., S18
Cramer, C., S32
Cramer, R., S18, S62
Cranberry, stem galls, bacterial isolations, S87
Crane, B. R., S44
Craven, K. D., S18, S62
Creamer, R., S7, S37
Crinipellis perniciosa, on cacao, genetic diversity, S71
Crisosto, C. H., S69
Cronartium spp.
—*C. quercuum*, on pines, genetic diversity, S134
—*C. ribicola*: multiple hosts, genetic structure, S73; speciation mechanism, gene flow, S98; on white pine, resistance gene Cr2, distribution, 691
Crouch, J., S18, S29
Crow, W. T., S19, S36
Crowe, F., S67
Crowley, M., S129
Crucifer
—Verticillium wilt, molecular types, 364
—white rust, genetic analysis of races 2 and 7, 959
Cryphonectria parasitica
—chestnut, deletion of hypoviral-regulated gene, S45
—cryparin in, processing and secretion, S85
—ERK homologue, cloning, S42
—HOG1 homologue, cloning, S69
—reovirus isolated from, *Coltivirus* relation, S36
—replication cycle and secretory pathway, components, S85
Cryptococcus nodaensis, freeze-drying survival, C/N ratio, S94
Csinos, A., S19, S20, S58
Cubeta, M. A., 610, S1
Cucumber, Pythium root rot, biocontrol, S45
Cucumber mosaic virus
—on cowpea, resistance marker, S29
—synergy with *Pepper mottle virus*, in bell pepper, S64
—on *Tetragonia expansa*, systemic infection and temperature, 1445
—on tomato, rhizobacterium-mediated growth promotion, protection, 1301
Cucumber mosaic virus, variation and population dynamics, transgenic plants, S100
Cucurbit
—disease management, famoxadone-based fungicides, S58
—viruses, distribution in Florida, S89
—yellow vine disease: genotyping strains, techniques, 1240; strains and phylogenetic analysis, 1233
Cucurbit yellow stunting disorder virus, on *Cucumis melo*, RNA detection, cover photo, July
Culbreath, A. K., S115, S125
Culler, M. D., S19
Culvenor, D., 1524
Cumagun, C. J. R., S19
Cunfer, B. M., S10
Curcurbit yellow stunting disorder virus, on melon, virus accumulation, 844
Curtis, V. L., S70
Cuzick, A., S89
Cycas necrotic stunt virus, on ornamentals, detection in New Zealand, S67
Cylindrocarpon destructans
—on ginseng, detection, 1533
—on grape, composted soil amendments, S31
Cynodon dactylon, dematiaceous hyphomycetes on, resistance detection and inoculation technique, 1565
Czembor, P. C., S124

Daayf, F., S94
Dactylaria higginsii
—bioherbicidal fungus, IPM component, tomato, S75
—bioherbicide for purple nutsedge, pesticide effect, S92
—nutsedge in pepper suppressed by, surfactants, S63
Dagraca, J. V., S61
Dahlia, viral diseases of, management, S69
Dai, Q., 1354
Dai, W., S88
Dakhil, H., S2
Dallot, S., 1543, S19
Dally, E. L., S95
Damicone, J., S114
Damsteegt, V. D., S19, S25, S100
Dane, R. A., 1368
Danet, J.-L., 644
Dang, P., S55
Dardick, C., 705
Darsow, J., S129
da Silva, F. G., 705
Database, plant pathogen, genetic and phenotypic information, resource, S43
Datnoff, L. E., 256, 535, S74, S81
Daub, M. E., S35, S82, S87
Daughtrey, M. L., S7, S118, S122, S125, S135
Davelos, A. L., S106

Davidson, J. M., S28
Davies, R. J., S35
Davis, E., S21, S23, S28, S37, S59, S81, S88, S91
Davis, M., S74
Davis, R. E., S95, S124
Davis, R. F., S82
Davis, R. M., 1014, S24, S45
de Boer, M., 626
De Boer, S. H., S57, S92, 262
Dean, R. A., S12, S21, S22, S40, S42, S47, S82, S83
Dean, R. E., S29
Debode, J., S20
de Boer, M., 626
De Boer, S. H., S57, S92, 262
Decanini, L., S39
De Ceuster, T. J. J., 1292
De Cicco, V., 564
De Cock, A. W. A. M., S8
De Curtis, F., 564
De Dobbelaere, I., S19
Dedryver, C. A., 1217
Defago, G., S3
Dehaan, T. L., S92
De Jonghe, K., S19
De La Fuente, L., S20
Delaney, T. P., S110
Delavault, P., 451
Délye, C., 219
DeMarsay, A., S20
Deng, F., 1407
Denoyes-Rothan, B., 219
Denslow, S. A., S35
de Oliveira, M. C., S16
Deom, C. M., S5, S64
Derie, M. L., S22
Derksen, R. C., S118
Derr, J. F., S125
Derrick, K. S., S20
Desaeger, J., S20
Desbiez, C., 1478
de Silva, A., 1124
de Souza, J. T., 54, 966, S20
Desvoyes, B., S95
Detter, J. C., 675
Detwiler, E. A., S40
Deulvot, C., 966
DeValerio, J. T., S15, S63, S75
Dewdney, M. M., S20
De Wolf, E. D., 428, S20, S53, S133
Déziel, E., S107
Dezwaan, T., S114
Diab, H. G., 1115, S21, S26
Diagne, M., S21
Diagnostics
—data analysis, event detection, S121
—National Plant Diagnostics Network, bioterrorism and sustainability, S121
—response activation and decision support mechanisms, S121
—standard practices, requirements, S121
Diaporthe spp.
—*D. citri*, pycnidial development factors, S63
—*D. phaseolorum*, on soybean, variability in Argentina, molecular characterization, 136
Díaz-Valasis, M., S25
Dick, R. P., S67
Dicklow, B., S135
Dickman, M. B., S100, S105
Dickstein, E. R., S66
Didymella bryoniae, on plants and in air, detection, S86
Diéguez-Uribeondo, J., 923, S21
Diener, S. E., S21
Diggle, A. J., 1073
Dillard, H. R., S78
Dill-Macky, R., S19, S75
Dinesh-Kumar, S. P., S110
Ding, S. W., S107
Dinoor, A., 1320
Disease forecasting
—*MARYGLYT* and *Cougarblight*, for fire blight on apple and pear, S20
—models, Fusarium head blight of wheat, factors, S20
Disease management
—greenhouse crops, electrolyzed oxidation water, S118
—organic crops, Australia, S134
—ornamental plants, principles, S122
—pear fire blight, warning system in Israel, 356
—resistance induced in greenhouse crops, S118
—root-knot nematode, cucumbers and squash, double cropping, S82
—storage and analysis system, Alkahest NuclearBLAST, S21
Ditylenchus dipsaci, on onion, chemo attractant, 127
Dively, G. P., S21
Di Vito, M., 1513
Dixon, A. G. O., S5
Dixon, E. W., 891
Dixon, P. M., 513, 1285, S7, S35
Djonovic, S., S21
Dobinson, K. F., 1533
Dobrowolski, M. P., 695
Dodd, K. K., 1082
Dogwood (see also *Cornus* spp.)
—powdery mildew, spray program in disease management, S62
Donahoo, R. S., S21
Dong, R., S37
Dongyi, H., S43
Donofrio, N., S22
Dopkins, D. M., S33
Dorman, C., S6
Dorman, E. A., S22
Dorrance, A. E., S73, S87
Dos Santos, A. R., S85
Dothistroma septospora, on *Pinus radiata*, hyperspectral imagery for assessment, 1524
Douglas-fir, Swiss needle cast
—quantification methods, 121
—severity, prediction in Oregon, 790
Douhan, G. W., 650
Doukhanina, E., S105
Dowkiw, A., 421
Driks, A., S117
Driver, J. G., S22
Drori, N., S105
Druffel, K., S48, S69
Dry, I. B., 547
Dudzinski, M., 1524
Dufault, N. S., S133
Duffie, L. E., S10
Dugan, F. M., S100
Duncan, J. M., S98
Duncan, K. E., S22
Duniway, J. M., 443, S33
Dunkle, L. D., 193, S33, S78
Dunning, F. M., S110
Dupper, G. E., 691
Dupuis, F., 1496
Dute, R. R., S34
Du Toit, L. J., S22
Dwinell, L. D., S27
Dyer, A. T., S90
Dyer, P. S., 650

Easley, S. A., S79
Eayre, C. G., S22
EcoPort Web site, plant pathology resource, S49
Edmunds, B. A., S22, S23, S46
Edwards, M. C., S75
Edwards, S. G., 364
Effertz, R. J., 604
Eisenmann, J. A., S23
Eizenga, G. C., S40
El-Allaf, S. M., S23
El-Assiuty, E. M., 853
Eleocharis kuroguwai, mycoherbicide efficacy, S37
El Ghaouth, A., 344, 349
Elias, E., S3
Elias, K. S., 1014
Elling, A. A., S23, S59
Elliott, D. R., S49, S67
Elliott, M. S., S15
Elliott, P. E., S23
Ellis, C. E., S11
Ellis, M. A., 995, S65
Elm, Dutch elm disease, monitoring spread, S106
El-Mehtar, S., S2
Elmer, W. H., 186, S23, S64, S133
Elmore, C. L., S29
Embellisia sp., on locoweed, endophytic, analysis, S7
Emechebe, A. M., S3
Endres, G., S10, S60
England, R., S24
Englander, L., S12
English, J. T., S54
English-Loeb, G. M., S60
Enterobacter cloacae, Fusarium dry rot affected by, in stored potato, factors, S86
Epichloë, life cycle, evolutionary process, S98
Epicoccosorus nematosporus, mycoherbicide for *Eleocharis kuroguwai*, S36
Eriksen, W., S45
Ertürk, Ü., S17
Erwinia spp.: infectivity of injured cells, S52; on pear, genetics in Japan, 1393
—*E. amylovora*: on apple, survival on shoots, S66; induced resistance to, bioagents, S2; on pear, diagnostic medium and sampling procedure, 931; plant extracts, control by, S2; in Rosaceae family, factors, S11
—*E. carotovora*: biofilms, antibiotic susceptibility, S57; genomics and pathogenicity, S93
Erysiphe necator, PCR for detection, S24
Eskalen, A., S24, S129
Esker, P. D., 210, S24, S61
Esmenjaud, D., 160
Espadas, F., 976
Espinosa, A., S108
Essenberg, M., 1204, S7
Eutypa spp., on grape, new species in California, S130
—*E. lata*, on grape, cell-wall changes, S129
Evans, M. R., S13
Evans, N., 657
Eversole, K., 524
Everts, K. L., S17, S21, S95
Exserohilum turcicum, on sweet corn, race 1 and *Ht1* gene, resistance, S13
Extension, Plant Disease Notebook, customizing a course, S7

Fabre, F., 1217
Fagaceae, trees in Japan, mortality, S102
Fahmy, Z. M., 853
Faize, M., 1496
Fakhoury, A. M., S24
Falacy, J. S., S24
Falk, B. W., S99, S100
Farman, M. L., 891
Farrall, L., 1452

Farrar, J. J., S24
Fatmi, M., S25, S76
Fauquet, C. M., 270, 1485, S110
Faure-Rabasse, S. M., S95
Fauteux, F., S133
Favrin, R., S6
Fayad, A. C., S25
Feil, H. 244, 675
Feil, W. S., 244, 675
Feliciano, A. J., S24
Felts, D., S55, S62
Feng, Y., S38
Fenille, R. C., S25
Ferguson, L. M., S25, S49
Fernandes, C. D., 176
Fernandez, G. E., S25, S49, S85
Fernandez, O., S30
Fernández-Acero, F. J., S14
Fernández-Pavía, S. P., S25
Fernando, W. G. D., S72, S94
Ferrandino, F. J., S91
Ferreira, R. B., 1505
Ferris, H., 747
Ferwerda-Licha, M., S25
Fery, R. L., S8, S82
Fessehaie, A. (Canada), 262
Fessehaie, A. F. (Georgia), S88
Festuca arundinacea, leaf spot, biocontrol with *Lysobacter enzymogenes*, 1103
Fett, W. F., S26
Fichtner, E. J., S26
Ficke, A., 547, 556
Fieselmann, D. A., S121
Figueira, E. L. Z., 917
Figuli, P. J., S72
Filion, M., 229, S132
Fisher, A. J., S26
Fisher, R. F., S108
Fist, A. J., 752
Fitt, B. D. L., 657, S10, S88
Fitzsimmons, S. P., S120
Flaherty, J. E., S97
Flax, pasmo, fungicides for, S10
Fleer, J. M., S26
Fletcher, J., 18, 1233, 1240, S64, S89, S94
Flier, W. G., 382
Flowers, J. L., 1471, S26
Floyd, A., S22
Fogg, M. L., S26, S133
Fogle, D., S47
Foissac, X., 644
Fomitopsis pinicola, oxalate partitioning in liquid culture, calcium and magnesium effect, S77
Forbes, G. A., S28, S116
Foreman, G. L., S26
Forest
—ecosystems in world, exotic pathogen protection, S119
—spruce-fir ecosystem, decline in North Carolina, S10
—wood stake decomposition, in northwestern USA, S74
Förster, H., 923, S21, S127
Forster, R. L., 683, 1430, S81
Foshee, W. G., S76
Foster, K. A., 1165
Fought, L., S128
Fouly, H. M., S27
Fowler, G. A., S56
Fowler, L., S41
Fraedrich, S. W., S18, S27
Fraile, A., 1422
Francis, D. M., S39
Franckowiak, J. D., 604
Francl, L. J., 397
Frank, S., S114
Frankliniella occidentalis, *Tomato spotted wilt virus* vector on pepper, spread, 1223
Fravel, D. R., S27
Frazer, J. T., S27
Frazier, B. E., 805
Frederick, R., S16, S43, S55, S58, S102, S103
Freeman, S., 219, 579
Fregene, M., S4
Freitas-Astua, J., S5, S54, S82
French, N. M., II, S46
French, R., S27, S38, S78, S99
French-Monar, R. D., S27
Frey, P., 421
Frick, M., S54
Friedland, S. I., S121
Friel, C. J., S128
Friesen, T. L., 397, SS3
Fritz, A. K., 784, S18
Fritze, D., S117
Frost, K. E., S27
Fry, J., S78
Fry, W. E., 382, 738, S7
Fu, Z., S108
Fuentes-Davila, G., S29
Funck Jensen, D., S104
Funderburk, J. E., S115
Fungicides (general) (see also Fungicides, specific)
—adjuvants, efficacy impact, S113
—application, factors, S113
—barley, powdery mildew, population affected by, 305
—demethylation inhibitor, *Monilinia fructicola* and hygromycin B resistance, relations, 1354
—discovery targeted, S114
—greenhouse applications, S118
—modes of action, S113
—*Phytophthora* spp., novel, microbioassay, 46
—powdery mildew on vegetable crops, mixtures, S114
—resistance evolution, S39
—resistance management: FRAC, S114; marketing, science, and politics, S114; scheduling problems, S114; turfgrass pathogens, S114
—resistance risk assessment, S113
—silicon amendments, plant-microbe interactions, S133
—on tree fruits, resistance problems, S114
—triazole, brown rot control, limitations, S113
Fungicides (specific) (see also Fungicides, general)
—azoxystrobin, synergism with serenade, disease control, S93
—Dazomet, forest nurseries, methyl bromide alternative, S42
—propamocarb and mefenoxam, *Pythium* on flower crop greenhouses, S135
—strobilurin, *Pyricularia grisea* resistance, mutations, 891
—trifloxystrobin and tebuconazole, registation update, S128
Furtado, E. L., S70
Fusarium spp.: on asparagus, NaCl and rhizobacteria, 186; on corn and pearl millet, fumonisin, in Georgia, S42; on many crops, *Bacillus* isolate antagontisic to, S15; in soil, wheat cover crop effect, S43; toxigenic, PCR detection, S9; toxins from, S98
—*F. circinatum*, on conifers, monoterpene in sap resin, S128
—*F. graminearum*: on maize, phenolics as resistance factors, S97; on maize, resistance factors, ferulic acid and pericarp, 712; on wheat, deoxynivalenol and mapping trait loci, S19; on wheat, head blight epidemic, risk assessment model, 428; on wheat, multienvironment trial, inoculation comparison for resistance, 1068
—*F. oxysporum*: on basil, PCR-real time identification, S70; on basil, vegetative compatibility tests, soil isolates, S23; on chickpea, races 0, 1A, 5, and 6, PCR assay, 200; on chickpea, races and fingerprinting with DNA, S41; on cotton, California isolate characterization, S45; genomic sequence in pathogenic and nonpathogenic isolates, S133; on lettuce, gene sequences, PCR detection method, S59; on melon, resistance gene mapping, markers, S42; pathogenic and biocontrol isolates, gene differences, S27; on radish, *Pseudomonas putida* for control, 626; on spinach, population dynamics, selective media, 1173; on sugar beet and spinach, variability, S33; on tomato, avirulence characteristics, 1360; on tomato, race 3 origin in California, 1014; on tomato, strain interactions, S125; wilt symptoms and ethylene expression, S128
—*F. pseudograminearum*, on wheat: genetic tolerance, S79; genotype reaction, S129
—*F. solani*: on bean, mycorrhizal relation, PCR and direct isolation, 229; on caladium tuber, new clades, S64; gene comparison with yeast, S51; on pea and bean, PR gene activation, transcription, S46; on soybean, gene analysis, during infection, S51; on soybean, image analysis of chromatograms, S83
—*F. verticillioides*: amylase, inhibited by hydrophobic amylase from corn, 917; on corn, detoxification genes, S29; on maize, fumonisin biosynthesis, regulatory genes, S97; on maize, systemic infection and temperature, S64; metabolite for *Bacillus mojavensis*, S6
Fyffe, A. E., S81

Gabriel, D. W., S15, S59
Gadoury, D. M., 547, 556, S28, S44, S60
Gaeumannomyces graminis
—on bentgrass, pathogenicity determination, S83
—transformation, hygromycin resistance, melanin effect, S27
—on wheat, fluorescent *Pseudomonas* spp. effect on decline soil, 54
Gafni, Y., S109
Gaitán-Solís, E., 88
Gale, L. R., 610, 1014
Gallaher, R. N., S88
Gallego, G., 88
Galloway, H., S24
Gal-On, A., 1478
Gamble, B., S32
Ganley, R. J., S65
Ganske, D., S58, S78, S90
Gao, B., S21, S23, S28
Gao, H., S52
Gao, X., 1006
Garay-Serrano, E., 382, S25
Garbelotto, M., S28
Garcia, M. E., S8
García-Arenal, F., 941, 1422
Garibaldi, A., S70, S80
Garkovich, L., S119
Garner, J., S11
Garnier, M., 644
Garnsey, S. M., S101
Garrett, K., S18, S28, S53
Garrido, C., S14
Garvin, D. F., S80
Garzon, C. D., S28, S124
Garzón, S., S6
Gaudet, D., S54
Gaugler, R., S103
Gay, P. A., S28

Geddens, R., S58, S78, S90
Gehmann, K., S113
Geiser, D. M., S28, S42, S50, S64, S124
Geminiviruses, host gene expression, S109
Genomes, NBS-LRR-encoding genes, S110
Genomic analysis, De!CIFR, system, S12
Genomics
—comparative and functional, in fungi, S109
—microbe initiative, plant-associated, letter to editor, 524
Gent, D. H., S29
Geraats, B. P. J., 813
Geranium
—Pythium root rot, fertilizer and biocontrol effect, S135
—Ralstonia wilt, agro-bioterrorism regulation case, S4
Gergerich, R., S40, S85, S95
Gerik, J. S., S29, S77
German, T. L., S101
Gessler, C., 493
Ghabrial, S. A., S94, S95
Ghanmi, D., S133
Ghebreiyessus, Y., S17
Ghimire, S. R., 236
Gianinazzi-Pearson, V., 966
Gibberella zeae
—on corn residue, temperature and moisture effect on perithecia, S133
—spore deposition, night, S77
—on wheat: epidemics in Kansas and North Dakota, 874; rain splash dispersal, in canopy, S23
Gibbons, J., S41, S49
Gibson, D. M., S44
Gibson, R. W., S5
Giesler, L. J., S39, S95
Gijzen, M., 323
Gilbertson, R. L., 478, 596, S109, S111
Gildow, F. E., S100
Gillaspie, A. G., Jr., S29
Gilles, T., 413
Gillian Turgeon, B., S109
Gilligan, C. A., 616
Gimenes-Fernandes, N., 502
Ginseng
—Alternaria blight, necrosis-inducing toxin, spore germination, 323
—*Cylindrocarpon destructans*, root rot, detection and molecular differentiation, 1533
Girard, M., 1478
Gisi, U., S113
Gitaitis, R. D., 528
Giverns, W. A., S48
Glasheen, B. M., S18, S29
Glauber, J. W., S120
Gleason, K. I., S23
Gleason, M. L., 513, 1285, S7, S22, S23, S35, S46, S86
Glenn, A. E., S6, S29
Glogoza, P., S60
Glomus intraradices, on bean, relation to *Fusarium solani*, PCR, 229
Goates, B., S29
Goddard, M. A., S35
Godoy, C. V., S103
Gold, S. E., S46, 524
Goldbach, R. W., 96, 1223
Goldman, P. H., S29
Gomar-Tinoco, D., 1513
Gomez, L., S30
Gómez-Guillamón, M. L., 844
Gonsalves, D., S78
González, E. (North Carolina), S30
Gonzalez, E. T. (Wisconsin), S30
González, R., 485
Goodwin, S. B., 738, 1158, S2
Gordon, M. P., S108
Gordon, T. R., S128
Gorski, L., S69
Gottwald, T. R., 502, 832, 1031, 1543, S9, S12, S19, S70, S120
Goulds, A., S10, S88
Gourbière, F., 1437
Gourlie, J. A., S79
Gowda, M., S40
Graham, J. H., S17
Grand, L. F., S8
Grape
—*Botrytis cinerea*, resistance correlations, 1263
—downy mildew, warning system, S44
—epiphytic pathogens, in California, S24
—esca and environmental factors, S24
—Eutypa dieback, detection, S76
—fungal population in vineyards, S14
—gray rot, defense reaction and latency, 316
—Longidorid nematodes, ribosomal genes and specific primers, 160
—methyl bromide alternative, replant, S77
—ontogenic resistance, flower heterogeneity, S28
—osmotin and thaumatin from, defense mechanism, 1505
—Petri and esca disease, Pennsylvania and New York, 524, S81
—phialophora-like fungi from, molecular systematics, S54
—Phomopsis cane and leaf spot, prediction system, S65
—Pierce's disease: fimbrial genes, 675; inoculation date effect, 244; messenger and particle film, S84
—powdery mildew: humidity effect, 1137; management using aerobiological data, S132; mite suppression, S60; ontogenic resistance, 547, 556
—yellows, insect vectors, Virginia, S7
Gray, F. A., S36, S80, S130
Gray, S. M., 1131, S13, S30
Greene, I. D., S29
Gregoire, T., S60
Gregos, G., S76
Greve, L. C., S74, S129
Grevesse, C., 1145
Grewal, S., S106
Grichar, W. J., S60
Griffin, R. L., S119
Griffin, T. S., S48
Griffith, G. S., 381
Griffiths, B. S., 1111
Grigal, D. F., S47
Groose, R. W., S36
Gross, D. C., S43, S88
Grove, G. G., S24
Groves, R. (North Carolina), S115
Groves, R. L. (California), S30
Growth, hyphomycetes on agar media, cellulose substrate, S72
Grunden, E., S56
Grünwald, N. J., 382, 738, S25, S30, S86, S107
Grybauskas, A. P., S21
Guaragna, M. A., S30, S57
Gubler, W. D., S24, S113, S129, S130
Gudmestad, N. C., 293, S67
Guerber, J. C., S112
Guérin, G., 219
Guerra-Moreno, A. S., S30, S57
Gugino, B. K., S31
Guhl, K. E., S31
Guilhabert, M. R., S31
Gullino, M. L., S70, S80
Gunasinghe, U. B., S31
Gundersheim, N. A., S34
Guo, B. Z., S31, S52, S55
Guo, L. Y., S31
Guo, M., S108
Guo, Y., S88
Gupta, S. C., S90
Gutierrez, L., S106
Gutiérrez, W. A., S31, S36

Haag, P., S66
Habibi, J., S6
Hadwiger, L. A., S31, S46, S108
Hagan, A. K., S32
Hagiwara, H., 1173
Hakiza, G., S50
Halgren, A., S32, S85
Halik, S., S133, S134, S135
Hall, A., S67
Halley, S., S10
Halterman, D. A., S32
Ham, J. H., S32
Hamamouch, N., S32
Hamblin, A. M., S41
Hameed, K. M., S3
Hamelin, R. C., S8, S41, S98, S132, S134, S136
Hamer, L., S114
Hamm, A., Jr., S80
Hamm, P. B., 805, S113
Hammerschmidt, R., S118, S121
Hammes, G., S20
Hammond, J., S32
Hammond, R. B., S5
Hammond, R. W., S32
Hammond, T. M., S33, S97
Hampton, R. O., S44
Han, S. I., S38
Han, S.-S., 1378
Hancock, J. F., S79
Haney, R. L., S104
Hanley-Bowdoin, L., S109
Hanna, J. W., S33
Hanna, L., S2
Hanna, W. W., S90
Hansen, E. M., 121, 790, S93, S102
Hansen, J. L., S52
Hansen, J. M., S80
Hansen, M. A., S124
Hansen, N. C., S16
Hanson, L. E., S33, *1606*
Hao, G., S33
Hao, J. J., 443, S33, S91
Hara, A. H., S4
Harbour, J., S78
Haring, M. A., 1360
Harman, G. E., S104
Harmon, P. F., S33
Harness, A. M., S34
Harnik, T. Y., S28
Harp, T. L., S34
Harrell, M., S39
Harrington, T. C., 901, 1274, S83
Hartman, G. L., S17, S35, S51, S83, S88, S103
Hartman, J. R., 1471, S26
Hartman, R., S10
Hartung, J. S., 953, S51
Hartzog, H., S6
Harveson, R. M., S34
Harvey, J. L., S10, S88
Hasenstein, K. H., S45
Hashim, J. M., S84
Hassan, M. H., S2
Hatcher, W. L., III, S34
Hatfield, J., S40
Haudenshield, J. S., S34, S133
Hausbeck, M. K., S22, S118
Havens, W. M., S95

Hay, F. S., S34, 752
Hayden, K., S28
Haye, I. I., S75
Haynes, J. G., S31, S34
He, J., S107
He, S. Y., S108
Hebbar, P. K., S20
Hedberg, J., S68
Heidel, G., 720
Heidenreich, M. C., S84
Heiniger, R., S114
Held, L. J., S130
Helicotylenchus dihystera, on sugarcane, conducive and suppressive soils, 1437
Helland, S., S7, S86
Helminthosporium victoriae, mycovirus infection, cellular RNA-binding effect, S95
Henkels, M. D., S11
Henn, A., S68
Henneberger, T., S34
Henning, S., S27
Henriquez, J. L., S35
Heong, K. L., S116
Hepperly, P. R., 1124
Herbicide, glyphosate and atrazine, degradation in soil from mixture, microbial activity, S104
Hermann, D., S113
Herms, D. A., S9, S48
Hernandez, A. G., S51
Hernández, L., S4
Hernandez, S., S35
Herren, H., S116
Herrero, S., S35
Herzog, Z., 356
Hess, D. E., S90
Hess, N. J., S35
Heterodera spp.: on *Arabidopsis*, ethylene signal transduction, S91; on *Arabidopsis thaliana*, MCM gene PROLIFERA, 35
—*H. glycines*: biocontrol with *Hirsutella* spp., S123; cellulases, characterization, S28; N-Viro soil effect, S93; parasitism proteins, immunodetection, S21; parasitism proteins, plant nuclear import, S23; similarity of genes in nematode and *Arabidopsis*, S88
—*H. latipons*, on cereals, root rot comparison, Mediterranean area, S77
—*H. schachtii*: soil suppression, fungi involved, S67; soil suppressiveness, fungal rDNA, fingerprinting, 1006; on sugar beet, trap crop radish for, S80; on sugar beet, trap crops, S130
Hibiscus, tobamovirus from, diagnostic technique, S42
Hicks, T. E., S17
Hidaka, S., 1560
Hiebert, E., 774, S89
High plains virus, on corn and wheat, detection in New Zealand, S49
Hildebrand, P. D., S11, S35
Hilf, M., S35
Hill, A. L., S33
Hill, C. B., S35
Hill, H., S41
Hill, J. H., S103
Hillman, B. I., S18, S29, S36
Hinton, D. M., S6
Hirano, S. S., 1082
Hirooka, E. Y., 917
History, plant pathology in North Carolina, S122
Hixson, A. C., S36
Hjeljord, L. G., 1593
Hobbs, H. A., S35
Hodgkiss, I. J., 236
Hoff, T., S89
Höfte, M., 813, S19, S20
Hogenhout, S. A., S84
Hoisington, D., 153
Hoitink, H. A. J., 1292, S37, S118
Hokanson, S. C., S79
Holbrook, C. C., S31, S52, S55
Hollaway, G. J., S36
Hollingsworth, C. R., S36
Hollowell, J. E., S36, S125
Holm, M., S78
Holm, R. E., S11
Holub, E. B., S89
Honda, K., 1560
Hong, C. X., 822, S36, S47, S123, S124, S125
Hong, S. G., S36
Hong, Y. K., S36, S37, S38, S49
Hoogenboom, G., S44
Hopkins, D. L., S37
Hoplolaimus galeatus, on creeping bentgrass, population dynamics in Kansas, S78
Hopp, H. E., 136
Hops
—powdery mildew, temperature effect on infection, 1587
—viruses, spread in Australia, S71
Horn, B. W., S59
Hornsby, S., S10
Horrell, J., S15
Horst, L. E., S37
Hosta spp., *Sclerotinia rolfsii* petiole rot, oxalic acid and resistance, S46
Host-pathogen interactions, dominance effect, coevolution in pathosystems, 633
Hotchkiss, M. W., S73
Houfek, T. D., S21
House, B. L., S77, S108
Howard, E. F., S5
Howard, R. J., S22
Howd, D., S30, S63
Howell, C. R., S21, S37, *1606*
Hsu, M. P., S15
Hsu, S. T., S52, S53
Hu, S., S94, 1115
Huang, G., S37
Huang, H. C., S52, S53
Huang, J.-S., S91
Huang, X., 35
Hubble, H., S37
Hüberli, D., S28
Hudelson, B. D., S4, S26
Hudler, G. W., S82
Huerta-Espino, J., 153, 881, S112
Hughes, L., S93
Hulbert, S., S54, S94
Hull, R., S111
Humbert, C., S125
Hunt, B., S113
Hunt, T. E., S95
Hurtado, P. X., S4
Hurtt, S. S., S51
Hussey, R. S., S21, S23, S28, S37, S88
Husson, C., 421
Hutchens, A., S38
Hutchinson, J. L., S38
Hwang, B. K., S38
Hwang, J. (North Carolina), S38, S118
Hwang, J. B. (Korea), S37
Hyde, K. D., 236
Hypovirulence, *Sclerotinia homoeocarpa* and *Ophiostoma novo-ulmi* mitovirus, 1407
Hyun, J. N., S36, S37, S38, S49

Idris, A. M., 774, S38
Ignatov, A. N., S9, S38
Impatiens balsamina, *Rhizoctonia solani*, composted potting mix effect, 1115
Inderbitzin, P., S98
Ingle, C. A., S64
Integrated pest management, Alternaria leaf blight on carrot, case study, 1320
IR-4
—biopesticide program, grants and regulatory assistance, S11
—project: fungicide registation update, S83; registration, crop grouping, efficacy data, S16
Iriarte, F. B., S39
Iriki, N., S65
Iris yellow spot virus, N gene, diversity in USA, S1
Irrigation
—disinfestion, ultraviolet irradiation, S123
—*Phytophthora nicotianae*, detection with PCR, 822
—pythiaceous species in water, PCR template preparations, S124
Isakeit, T., S39
Ishida, M. L., S50
Ishiguro, K., 1560
Ishimaru, C. A., S29, S39
Islam, S. Z., S39
Ismael, A.-S. M., 853
Isshiki, A., 768
Ito, S., S102
Ittu, M., 1068
Ives, A. R., S91
Ivors, K., S28

Jabaji-Hare, S., 229, S136
Jackson, T., S6
Jacobi, W. R., 1037, S47
Jacobsen, B. J., S7, S117
Jaffee, B. A., 1599
Jahn, R., S39
Jaime, M. D. L. A., S39
Jaime-Garcia, R., 1190, S39
James, R., S39
Jamir, Y., S108
Janes, M. D., S108
Janisiewicz, W. J., S40, S50
Jansky, S. H., S27
Jantasuriyarat, C., S40, S41
Jara, C., 88
Jarret, R., S16
Jeffers, S. N., 46, 822, S23, S63
Jellison, J., S77
Jenkyn, J., S10, S88
Jensen, B., S104
Jensen, P. J., S40
Jensen-Tracy, S. L., S82
Jeong, J. S., S40
Jermini, M., 493
Ji, J., S40
Jia, L., S40
Jia, Y., 1452, S40, S41
Jiang, H., S109
Jijakli, M. H., 1145
Jiménez-Díaz, R. M., 200, 1513, S41
Jiménez-Gasco, M. M., 200, S41
Jin, Y., 604, S93
Jo, Y., S41
Jobin, T., S41
Jochum, C. C., S93
Johnson, A. M., S41
Johnson, C. S., S41
Johnson, D. A., 805, S42, S43, S66
Johnson, E., S71
Johnson, H. A., Jr., 380
Johnson, K. B., S82
Johnson, V., S41
Johnston, D., 712
Johnston, S. A., S26, S133
Joly, D. L., S41, S134
Jomantiene, R., S124
Jones, A. L., 1393

Jones, A. T., 71
Jones, D., 720
Jones, J. B., 535, 1415, S21, S27, S62, S66, S74
Jones, J. D., S41
Jones, J. P., S74
Jones, S. S., S50
Joobeur, T., S42
Joosten, N. N., 96, 1223
Joppa, L. R., S80
Jordan, D., S70, S78
Jordan, K. S., S62
Jordan, R. L., S30, S57
Joshi, M., S13
Joshi, R., S106
Julotok, M., S13
Jung, G., S15, S72, S73, S76
Jung, H. J., S42
Jurgenson, J. E., S19
Jurjevic, Z., S42
Juzwik, J., S42, S101

Kabir, Z., S131
Kadir, J., S75
Kaeppler, H. F., 860
Kahn, M. L., S77, S81, S108
Kaiser, R., S114
Kakar, R. S., S17
Kalat, S., S21
Kalloo, G., 1485
Kaloshian, I., 35
Kamenova, I., S42
Kanaan-Atallah, Z., S42, S43
Kaneko, A., S69
Kanematsu, S., 1560
Kaneshiro, W. S., S43
Kang, H. (Texas), S43
Kang, H. W. (Korea), S36
Kang, M. H., S43, S66
Kang, S., 1378, S43, S45
Kangatharalingam, N., 1204
Kannenberg, E., S34
Karakashian, A., S2
Katan, J., 1247
Kataoka, T., 42
Kavanagh, K., S131
Kayim, M., S20
Kazmierczak, P., S85
Kean, D., S44
Keen, N. T., 18
Keinath, A. P., S43
Keith, L. M., S43
Keizer, L. C. P., 666
Kelemu, S., 176, S43
Keller, B., 493
Keller, K. E., S44, S58, S85
Keller, M., 316
Keller, N. P., S33, S97
Kellerhals, M., 493
Kelley, A. T., S48, S49
Kelly, J. D., S70
Kemerait, R. C., Jr., S11, S44, S123
Kemmitt, G. M., S67
Kenerley, C., S21, S60
Kennedy, G., S1, S79, S115
Kennedy, R., 413
Kennelly, M. M., S28, S44
Kenney, D. S., S117
Keremane, M., S71
Kers, J. A., S13, S44
Keurentjes, J. J. B., 626
Kexian, Y., 176
Khalid, S., 1422
Khan, J., S44
Khan, M. F. R., S44
Khan, N. I., S44
Khan, V. A., S81
Khang, C. H., S45
Khangura, R. K., 1073
Kharbanda, P. D., S45
Khosla, S., S118
Khush, G. S., 147
Kianian, S., 397
Kiewnick, S., S45
Kilaru, A., S45
Kilic-Ekici, O., 1103
Kim, D. H., S42, S45, S69
Kim, E. S., S69
Kim, H. J., S45
Kim, H. T., S38
Kim, J. H., S45
Kim, K. W., S89
Kim, M. J., S45, S69
Kim, M. S. (Hawaii), 1124
Kim, M.-S. (Idaho), S33, S74
Kim, S. (Suwon, Korea), 82
Kim, S. C. (Milyang, Korea), S36, S37, S38, S49
Kim, S. K. (Chonju, Korea), S42
Kim, Y. (California), S45
Kim, Y. H. (Korea), S45
Kim, Y.-S. (Ky.), 891
Kindt, F., 626
King, J. J., S42
Kinkel, L. L., S106
Kinloch, B. B., Jr., 691, 1044
Kirk, W. W., 1400
Kirkpatrick, B., S31, S74
Kirkpatrick, T. L., S46, S104
Kishi, L., S82
Kistler, H. C., 1014
Kitajima, E. W., S4, S54
Kleinschmidt, C. E., S46
Klessig, D. F., S15, S47
Klietman, F., 931
Kloepper, J. W., 1301, S117
Klopfenstein, N. B., S33, S73, S74
Klosterman, S. J. (Georgia), S46
Klostermann, S. J. (Washington), S46, S108
Knodel, J., S10, S60
Knoedler, J., S125, S135
Knudsen, I. M. B., S104
Knudson, D. L., S39
Kobaisy, M., S68
Kobayashi, D., S51, S73, S108
Kobori, T., 1445
Koch, C. A., S86
Koch, D. W., S80, S130
Koehler, K. A., S46
Koehn, A. C., S81
Koeller, W., S113
Koerbler, M., S5
Koh, J. M., S38
Kohls, C., S120
Kohn, L. M., S39, S98
Koike, S. T., S28, S29, S47, S127
Kolmer, J. A., S67
Konczal, K. M., S89
Kondo, H., S36
Kong, P., 822, S36, S47, S124
Kopp, H. T., S78
Korndörfer, G. H., 256
Koski, R. D., S47
Kosman, E., 1464
Kotcon, J. B., S47
Kraft, J. M., S30
Kral, C., S78
Krall, J. M., S130
Kramer-Haimovich, H., S105
Krasnoff, S. B., S44
Krattiger, A. F., S111
Krause, C. R., S37, S118
Krause, M. S., 1292, S52
Krauss, U., 1274
Kreitman, M., S83
Kremer, R. J., S104
Kristjansson, G., S8
Kritzman, G., 356, 931
Kromroy, K. W., S47
Kroon, L. P. N. M., 382
Krutz, L. J., S104
Kucharek, T. A., S89
Kuck, K.-H., S114
Kudrna, D., S40
Kuhajek, J. M., 46
Kuldau, G. (Georgia), S6
Kuldau, G. A. (Pennsylvania), S97, S98
Kulemeka, B. P., S34
Kulkarni, R. D., S47
Kumar, D., S47
Kumar, K. A., S90
Kumar, P. L., 71
Kumar Choppakatla, V., S48
Kuniyasu, K., 1173
Kuniyuki, H., S111
Kunkel, D. L., S11
Kuramae, E. E., S25
Kurle, J. E., S16
Kushalappa, A. C., S55, S72
Kuti, J. O., S48
Kwak, D. Y., S49
Kwon, B. R., S42
Kyde, K. L., S84
Kyo, M., 768

Labavitch, J., S74, S129
Labbé, C., S74
Labonne, G., 1543, S19
Lacava, P. M., 953
Lacy, G. H., S76, S125
Laflamme, G., S135
Laforest, J. H., S48
Lagoke, S. T., S3
Lalancette, N., 1165
Lamari, L., 391
Lambert, K. N., S39
Lamondia, J. A., S48
Lamour, K. H., S118
Lan, Z., 1581
Landa, B. B., 982, S20
Landschoot, P. J., S112
Lang, D. L., S31
Langston, D. B., Jr., S77, S82, S113
Lanier, J., S78
Lapaire, C. L., 193
Larkin, R. P., S11, S48
Laroche, A., S54
Larrue, J., 1308
Larsen, R. C., S48
Latham, S. R., S24
Latin, R., S33
Laux, P., S2
Laverdiere, L., S34
Lawrence, C. B., 813, S18, S62
Lawrence, G. W., S38, S48, S49
Lazarowitz, S. G., S110
Leach, J. E., 524, S53, S57, S94
Leandro, L. F. S., 513, 1285, S49
Lecoq, H., 1478
Lee, B. C., S36, S37, S38, S49
Lee, D. C., S37, S49
Lee, D. K., S43, S66
Lee, E., S57
Lee, F. N., S40, S49, S79
Lee, H. K., S48, S49
Lee, I.-M., 1368, S2, S49
Lee, K. S., 147
Lee, K. W., S38
Lee, R. F., S8, S30, S49, S57, S71, S86
Lee, S. C., S38

Lee, Y.-H., 82, 1378
Lee, Y. S., S50
Legac, J., S106
Legard, D. E., S61
Lei, C., S57
Leite, B., S4, S50
Lemanceau, P., 966
Lennon, K. A., S59
Leonard, K. J., 860, S71
Lepo, J. E., S71
Lepoivre, P., 1145
Leptosphaeria maculans, on canola:
—biocontrol antifungal compounds, S72
—model for predicting ascospore showers, 1073
Lerner, J. M., S134
Lertsuchatavanich, U., S50
Leslie, J. F., 853, 874, S19, S93
Lesourd, M., 1023
Leterrier, J. L., 1217
Letousey, P., 451
Letter to the editor
—microbe genome initiative, plant-associated, 524
—multilocus correlation, parameter for plant pathogen population study, 1464
Lettuce
—bacterial leaf spot: etiology and epidemiology, S74 genetic diversity of pathogen, 596; pathogenic variation, 64
—drop, *Sclerotinia* spp., sclerotia and soil moisture and temperature, 443
—drop, temporal and spatial dynamics, *Sclerotinia minor* sclerotia, irrigation and tillage effect, 1572
—leaf spot, bacterial population effect, S29
—Phoma basal rot, in California, S47
—powdery mildew, chemical management, evaluation, S58
—tombusvirus, soil environment effect, S101
Leung, H., S57, S113
Leveau, J. H. J., S106
Leverentz, B., S50
Lévesque, C. A., 262, S6, S8, S52, S66, S132
Levin, J. S., S23
Levy, C., S103
Levy, L., S59, S121
Lewellen, R. T., S54
Lewers, K. S., S79
Lewis, W. J., S42
Lewis Ivey, M. L., 64, S50
Lherminier, J., 1308
Li, F., S107
Li, H. J., S50
Li, H. W., S107
Li, R., 1301, S51
Li, S., S51, S83
Li, T., S79
Li, W.(Nebraska), S105
Li, W.-B. (Maryland), 953, S51
Li, W. X. (California), S107
Li, X., S51
Li, Y. H., S52
Li, Z., S52
Liang, H., S52
Liang, X. Q., S52
Liao, C.-H., S52
Lieghard, R., 493
Lievens, B., S52
Liew, E. C. Y., 236
Lim, T. H., S128
Lin, H. X., S100
Lin, X., 1258, S94
Lin, Y. C., S52, S53
Lin, Y. H., S52, S53
Linde, C. C., S53
Lindow, S. E., 675, 727, 1209, S106, S120
Linholm, K. M., S53
Lipps, P. E., 428, S17, S20, S23, S53, S133
Listeria monocytogenes, on cabbage, transcription, S69
Liu, B., S53
Liu, H.-Y., S54
Liu, J. Q., 959
Liu, L., S51
Liu, Q., S95
Lizarraga, C., S116
Llano, G. A., S4
Locali, E. C., S54
Logrieco, A., S98
Lohar, D. H., S108
Loke, J. B., S4
Long, L. A., S54, S81
Long, S. R., S108
Longidorus sp.
—on loblolly pine, bare fallow effect, S18
—in pine seedlings, chemical treatments, S27
Loper, J. E., S11, S72, S82, S108
Lopes, J. R. S., S4
López, C. E., 88
López, M. M., 286, 485
López, R., 1553
López-Gerena, J., S54
López- López, M. J., 485
Loppnau, P., S134
Lorbeer, J. W., S34, S133
Loria, R., S13, S44, S121
Louws, F. J., S22, S25, S49
Lowe, R., S113
Lozoya-Saldaña, H., 382
Lu, G., S40
Lu, R., S107
Lu, S.-E., S88
Lu, Y. J., S54
Lu, Z.-X., S54
Lübeck, M., S104
Lucas, W. J., S109
Lucca, F., 136
Luce Carlson, K. M., S54
Lugo, Y., S74
Lui, L. H., S55
Lukach, J., S10
Luke, E., S121
Lundeen, P., S66
Luo, D., S128
Luo, M., S55
Luo, Y., 102, S55, S56, S128
Luster, D., S43, S55
Lutton, E., S106
Luvisi, D., S84
Lyerly, J. H., S55
Lynch, J. P., S45
Lynch, R. E., S31, S52
Lyngkjaer, M. F., S112
Lysobacter enzymogenes
—antifungal antibody from, S51
—biocontrol agent: secretory pathway, S73; for turfgrass and bean, root growth inhibitor, S51
—biocontrol of leaf spot in tall fescue, 1103

Ma, R., S55
Ma, Z., S55, S56, S128
Maas, J. L., S79
Macdonald, W. L., 1039
Machado, C., S97
Machado, M. A., 28, S5, S54, S82
MacHardy, W. E., S133
MacKasmiel, L. A., S56
Mackey, B. E., 1263
Mackey, I. C., S85
Macroptilium lathyroides, on bean, new begomoviruses, 774
Madariaga, R. B., S56
Madden, L. V., 428, 458, 995, 1292, S20, S23, S28, S37, S53, S65, S92, S133
Magarey, P. A., S44
Magarey, R. D., S56
Magnaporthe spp.
—*M. grisea*: cDNA library, SMART and recombinational cloning, S40; on foxtail millet, host specificity, wheat and foxtail millet crosses, 42; pathotypes and fingerprint haplotypes, in Korea, 1378; on rice, BAC shotgun libraries, sequencing, S82; on rice, chromosome 7 analysis, S83; on rice, gene screening, S22; on rice, mesophyll cell, cover photo, May; on rice, *Pi-ta* resistance locus, variation, 1452; on rice, protein interaction with adenylate cyclase and kinase, S47; on rice, silicon effect, ultrastructure and cytochemistry, 535; on rice and turfgrass, rice defense genes, S41
—*M. oryzae*, on ryegrass, detection method, S33
Mahaffee, W. F., 1587, S105
Mahovic, M. J., S56
Mahrer, Y., 1247
Maier, T., S37, S59, S88, S91
Maize (see also Corn)
—aflatoxin resistance in lines, protein association, S12
—*Fusarium graminearum*, resistance factors, ferulic acid, 712
—gray leaf spot, environmental effect, S70
—late blight, diversity and amplified fragment length polymorphism, Egypt, 853
—northern leaf blight, resistance, S112
—trichome, microcycle conidiation of *Cercospora zeae-maydis*, cover photo, February
Maize fine streak virus, host range and genome sequence, S84
Majerczak, D. R., S61
Makalowska, I., S43
Malnoy, M., 1496
Maloney, P. E., S28
Maloney, S. C., S77, S108
Malouin, C., 712
Malvick, D. K., S56
Manio, P. D., 1052
Manjuanth, K. L., S8, S30, S57, S86
Manosalva, P., S57
Mansour, M., 1263, S69
Manter, D. K., 121
Manulis, S., 356, 931
Manuscript preparation, author's guide, 7
Maragos, C. M., S46
Marais, L. J., S8
Marco, C. F., 844
Marco, M. L., S106
Marcus, R., 931
Margosan, D. A., S57
Maris, P. C., 96, 1223
Mark, G. L., S34
Marois, J. J., S115
Maroon-Lango, C., S32, S57
Marot-Leblond, A., 1023
Marquardt, S., S57
Marques, L. L. R., S57
Marsella, M., S49
Marshall, L., S113
Martin, F. N., S10, S57, S58
Martin, G. B., S110
Martin, K. J., S71
Martin, M., S58, S78, S90
Martin, R. M., S128
Martin, R. R., S32, S44, S58, S85
Martin, T. J., S78
Martinez, C., S132
Martínez, E., S71
Martínez, M. C., 136

Martínez del Pozo, Á., 1344
Martinez-Espinoza, A. D., S46
Martinez-Ochoa, N., S19, S58
Martini, M., 1368
Marucci, R. C., S4
Marvel, J., S58, S124
Materne, M. D., S74
Matheron, M. E., S58, S114
Matheson, F., 167
Mathews, H., S58
Mathre, D. E., 751, 959
Mathur, S., S130
Matveeva, E. V., S9, S38, S58, S65
Maurhofer, M., S3
Maust, B. E., 976
Mavrodi, D. M., 982, S20, S58, S108
Mavrodi, O. V., S58
Mavrodieva, V., S59
Maxson-Stein, K., 1393
Maxwell, D. P., S75
May, K. J., S59
Mayama, S., 42
Mayberry, K. S., S85
Mayfield, J. D., S69
Maymon, M., 219, 579
Maynard, C. A., S52
Mazarei, M., S59
Mazumdar-Leighton, S., S78
Mbofung, G. M., S59
McAlpin, C. E., S59
McBeath, J. H., S28
McBride, P. O., S31
McClean, P. E., 1430
McCormick, W. A., S15
McDaniel, P. A., S74
McDonald, B. A., 941, S53
McDonald, G. I., S33
McDonald, J., S8
McDonald, V. T., S129
McDowell, J. M., S89
McEvoy, J. L., S69, S105
McFadden, A. G., S67
McGee, D., S64
McGhee, G. C., 1393
McGovern, R. J., S64, S74
McGrath, M. J., S60
McGrath, M. T., S59, S134
McK Bird, D., S76
McKee, K. A., S74
McKinley, N., S78
McLaughlin, S. T., S12
McLaughlin, W. M., S75
McLean, K. S., S38, S48, S69
McMahon, M. B., S55
McManus, P. S., S87
McMullen, C. R., 1533
McMullen, M., S10, S60
McNally, D. J., S74
McNellis, T. W., S40
McRae, K. B., S35
McSorley, R., S88
McSpadden Gardener, B. B., S100, S106, S117
Meacham, T. E., S78
Medeiros, F. H. V., S60
Mei, C., S60
Mejía, J. F., S4
Melampsora spp.
—*M. larici-populina*, on poplar, resistance, leaf disk bioassay, 421
—*M. medusae*, on poplar, control in stool beds, S128
Melcher, U., 1233, 1240, S64, S94
Melidossian, H. S., S60
Mellado, M. Z., S56
Mellon, J. E., S60
Meloidogyne spp.: on *Arabidopsis thaliana*, *MCM* gene *PROLIFERA*, 35; host responses, S76; plant cell surface changes from infection, S31
—*M. arenaria*, infection with species of Moniliales, S61
—*M. artiellia*: on chickpea, interaction with *Fusarium oxysporum*, race 5, 1513; on chickpea roots, cover photo, December
—*M. baetica*, on olive, in Spain, 1093
—*M. incognita*: on corn, root border cell presence, 1111; on maize root, cloud of detached cells, cover photo, September; parasitism genes, subtractive strategy, S37; on tomato, biocontrol with *Paecilomyces lilacinus*, S45; on tomato, biocontrol strategy, S73
—*M. javanica*, isothiocyanate sensitivity, laboratory assay, 747
—*M. partityla*, on pecan, resistant rootstocks, S66
Melouk, H. A., S16, S60, S76
Melton, T. A., S31
Melzer, M. S., S14
Mendelssohn, I. A., S74
Méndez-Lozano, J., 270
Mendiola-Olaya, E., 917
Mendoza-Herrera, A., S60
Menelas, B., S61
Menge, J. A., S129
Mengistu, A., S61
Menkir, A., S12
Menzies, J. G., 167, 402, S74, S133
Mercier, J., S61
Mergoum, M., S3
Merighi, M., S61
Mertely, J. C., S61
Meruliporia incrassata, oxalate partitioning, calcium and magnesium effect in culture, S77
Mervosh, T. L., S48
Meyer, M. C., S25
Meyer, S. L. F., S2, S61
Meyers, B. C., S110
Miao, H., S61
Michailides, T. J., 102, S55, S56, S62, S128
Michel, F. C., Jr., 1292
Michelmore, R., S110
Michelutti, R., S62
Michoski, C. E., S72
Microbial ecology, genotypic diversity data, analysis, 738
Microclimate, greenhouse, factors and manipulations, S118
Microdochium nivale
—on bentgrass, resistance assay, S15
—on turfgrass, variation in Wisconsin, S73
Microorganism populations, geneotypic diversity data, analysis, 738
Miedaner, T., 1068, S19
Mikkelsen, L., S104
Miklas, P. N., 683, S48, S81
Mikota Gabler, M., 1263
Mila, A. L., 758, S62
Milat, M.-L., 1308
Miles, M. R., S103
Milgroom, M. G., 738, 1378, S41
Miller, D. R., S16
Miller, G., S82
Miller, J. D., S80
Miller, S. A., 64, S50
Miller, T. A., S8
Miller, T. C., S113
Milligan, B. G., S132
Mills, D., S53
Milus, G., S3
Milyutina, I. A., S9
Ming, R., 1124
Minsavage, G. V., 1415, S62, S66
Minz, D., 219, 579
Mirza, M., S45
Mitchell, D. J., S81
Mitchell, F. L., 1233, 1240, S94
Mitchell, T., S18, S22, S59, S62, S82, S83
Mitkowski, N. A., S62
Mitter, V., S3
Miyao, E. M., 1014
Mmbaga, M. T., S5, S62, S63, S66
Mo, A. Y., S42
Model
—blackleg sporacle, ascospore shower in canola, 1073
—durable resistance, measures, 616
—gene-for-gene, wheat tan spot, 391
—gray leaf spot of ryegrass, temperature and leaf wetness duration, 336
—linear approach, disease in spatial hierarchy, 458
—*Phomopsis amygdali* on peach, temperature and moisture effect on sporulation, 1165
—risk assessment, wheat Fusarium head blight, epidemics, 428
—ryegrass stem rust, degree-hour wetness duration and predictions, 467
—soilborne pathogens, survival under solarization, 1247
—Swiss needle cast on Douglas-fir plantations, Oregon, 790
—weather-based forecasting, foliar fungal plant pathogens, S56
Modeling, NAPPFAST, weather-based mapping of plant pathogens, S56
Moënne-Loccoz, Y., 1437
Moffett, K., S63
Mohan, K., S115
Mohan, S. K., S1
Moldenhauer, K., S41
Moldovan, M., 1068
Molecular markers, phenotypic analyses and epidemiology, S107
Molinéro, V., 1023
Momol, M. T., S66, S115
Mondal, S. N., 1031, S63
Monier, J-M., 1209
Monilinia spp.
—*M. fructicola*: on canned peaches, cover photo, November; hygromycin B resistance, fungicide susceptibility and sporulation effect, 1354, on plum, latent infection, S55; on prune, latent infection and threshold conditions, 102; on stone fruit, benzimidazole resistance, in California, S56
—*M. vaccinii-corymbosi*, on blueberry, pollen mimicry by conidia, S65
Monosporascus cannonballus, pentaketide and hexaketide metabolites, analysis, S90
Monteiro, S., 1505
Montón, C., 485
Moore, G., S71
Moore, J. A., S33, S74
Moore, M. (Texas), S17
Moore, M. K. (Washington), S16
Moore, P. H., 1124
Moore, P. P., S127
Moorman, G., S28, S45, S124, S135
Morales-Payan, J. P., S63
Morandi, E. N., 136
Moreno, A. B., 1344
Moreno, I. M., 1422
Morgan, D. P., S55, S62, S128
Morgan-Jones, G., S69
Mori, M., 1173
Morin, C., S134
Morrell, J. J., S119
Mortimer, M. M., S77, S108

Morton, A., 364
Moyer, J. W., S1, S55, S79, S84, S99, S115
Muangsan, N., S109
Muehlbauer, F., S16
Mueller, D. S., S63
Mueller, J. D., S82
Muller, G. W., S82
Mundt, C. C., S28, S100, S107
Mungbean, bruchid resistance, defensin, S15
Munkvold, G. P., S64, S70
Murakami, J., 42
Murata, M., S102
Murillo, J., 1553
Murillo-Williams, A., S64
Murphy, J. F., 1301, S34, S64, S117
Murray, T. D., 650, S50, S65, S87
Murray, W. K., S47
Muscodor albus, biofumigant, green mold and sour rot of lemon and gray mold rot of grape, S61
Mushroom, shiitake, leachate for bacterial wilt control, S68
Muskmelon, vine decline, cultivar susceptibility, S85
Mutaqin, K. H., S64
Mycorrhizae, arbuscular, symbiosis-related genes, cloning, S134
Mycosphaerella spp.
—*M. citri*: ascospores, release and dispersal factors, 1031; on citrus, mating behavior and pseudothecial ontogeny, S63; on grapefruit, epidemiology and control, S63
—*M. graminicola*: host resistance response, S22; on wheat, resistance gene, molecular mapping, 1158
Mycotoxin
—aflatoxin, cottonseed contamination, in Texas, 1190
—food contamination, Africa, factors, S116
—ochratoxin: in grape and wine, S99; in small grains, S99
—RNAi and model system, *Aspergillus*, S97
Myers, J. R., 683, 1430, S44, S81
Myxobacteria, plant pathogens lysed by, S12

Na, S. Y., S43, S66
Nagy, M. A., S97, S98
Naidu, R. A., S64
Nakamura, Y., 1228
Nakayashiki, H., 42
Nalim, F. A., S64
Nameth, S. G. P., S91
Nascimento, L. C., S64
Nash, M., S17
Nault, B. A., S78
Navas-Cortés, J. A., 1513
Navi, S. S., S65, S92
Nawar, H. F., S48
Nazaret, S., 1437
Ndum, O., S30
Negatu, A., S17
Nelson, B. D., S65
Nelson, D., S130
Nelson, G., S114
Nelson, R. J., S28
Nematicides, preplant organic acid, for nematodes on tomato and strawberry, S62
Nematodes
—entomopathogenic, transgenic, risk, S103
—population dynamics, winter cover crops in Florida, S88
—root-knot, egg recovery from roots, methods, S129
—soil fumigation and oxamyl drip, in vegetable plasticulture, insects, S20
Nematode-trapping fungi, activity and most probable number correlation, 1599
Neotyphodium sp., in forage grasses, anti-mammalian toxin genes, S97
Nerad, T., S13
Nester, E. W., S108
Nester, S. E., S10
Neumann, P., S41
Nevins, D. J., S128
New Pest Advisory Group, potential within USA, S41
New, S., S1, S55
Newcombe, G., S65, S129, S131
Newman, M. L., S29
Ngugi, H. K., S65
Nguyen, K.-P., S82
Niblett, C., S57, S71
Nicole, M., 1308
Nikolaeva, E. V., S58, S65
Nischwitz, C., S65, S129
Nishio, Z., 1228, S65
Nita, M., 995, S65
Nitric acid synthase, pathogen-inducible, on *Arabidopsis* and tobacco, S15
Nitric oxide, synthase in higher plants, gene cloning attempt, S91
Nitrogen, stable isotope ratios, hosts and parasites, S129
Nitzan, N., S66
Niu, X. F., S66
Nnodu, E., S63, S66
Noh, T. H., S43, S66
Nolasco, G., 278
Nolin, S., S22, S42
Nordheim, E. V., S91
Norelli, J. L., S66
Norman, D. J., S21
Norton, G., S116
Nourrisseau, J.-G., 644
Nunes, J., Jr., S103
Nutter, F. W., Jr., 210, 513, 1285, S24, S61, S103
Nyczepir, A. P., S66

Oak (see also *Quercus* spp.)
—decline, in Europe; in eastern USA, S102
—ecosystem dominated by, in world, S102
—Phytophthora diseases, S102
—sudden oak death, chemical treatment strategy, S28
—wilt, epidemic in USA, S102
—worldwide disease threat, S101
Oak, S. W., S102
Oat, crown rust, seedling resistance, 860
Oberle, C. S., S90
Obermeier, C., S101
Obituaries
—Charles Lee Campbell, 381
—Robert Harry Stover, 916
—Stephen Wilhelm, 380
Obradovic, A., S66
O'Brien, P. A., 695
Ocamb, C. M., 1587
Ochiai, N., S67
Ochoa-Corona, F. M., S49, S67
Odvody, G., S39
Oelke, L. M., S67
Oemichen, B., S67
O'Gorman, D., S66
Ohki, S. T., 1445
Ohtani, K., 768
Okoli, C. A. N., 364
Olano, C. T., S71
Olatinwo, R. O., S67
Olaya, G., S1, S67
Old, K., 1524
Olivain, C., S125
Olive
—*Pseudomonas savastanoi*, RNA viruses, reverse transcription-PCR, 286
—root-knot nematode, new species in Spain, 1093
Oliveira, M. M., 278
Olivier, C., S67
Olmos, A., 286
Olsen, M. W., S10
Olson, B. D., S67
Olson, M. E., S57
Olson, M. V., S108
Olson, S. M., S115
Omarov, R., S68, S95
O'Neill, T., S47
Onion
—Botrytis blight, airborne conidia, S14
—*Ditylenchus dipsaci*, root exudates and chemo attractant, 127
—pink root, cultivar susceptibility, S77
Opgenorth, D., S76
Ophiosphaerella herpotricha, bacterial-mediated transformation, S62
Ophiostoma spp., REMI transformation, S135
—*O. novo-ulmi*, mitovirus, conspecific with *Sclerotinia homoeocarpa*, hypovirulence, 1407
Oppenheim, D., 356, 931
Orabi, J., 391
Orange, *Xylella fastidiosa*, on fruits and seeds, seedling transmission, 953
Orchid, pathogenic bacteria, characterization, S43
Orobanche spp.
—*O. aegyptiaca*, host resistance enhance by sarcotoxin IA, S32
—*O. cernua*, on tomato, salinity effect on germination, S3
—*O. ramosa*, on *Arabidopsis thaliana*, defense gene expression analysis, 451
Oropeza, C., 976
Ortiz Islas, S., 153
Osaki, T., 1445
Osborne, L. E., S93
Osterbauer, N. K., S68
Oszako, T., S102
Otaye, D. O., S68
Otrosina, W. J., S68
Oudemans, P. V., S20
Ouellet, T., S97
Overton, B. E., S54, S81
Ownley, B. H., S11
Ozakman, M., S68
Özdemir, Z., S134

Pacumbaba, R. O., Jr., S68
Pacumbaba, R. P., S68
Pagani, M. C., S68
Page, K., S68
Page-Dumroese, D. S., S74
Paguio, O. R., S64
Pair, S. D., 1233, 1240, S94
Paiva, W. M., S103
Palermo, S., S89
Palmateer, A. J., S69
Palmquist, D. E., S86
Palou, L., S69
Palumbo, J. D., S69
Pan, H., S83, S114
Panaccione, D. G., S97
Pandey, P. K., 1485
Panella, L., S33
Pannu, S. S., S72
Panter, S., S105
Pantoea stewartii
—alternative host survey, in Iowa, S24
—on corn: flea beetle populations, infestation, 210; *lon* protease as regulator of protein secretion system, S32

—hrp response regular, S61
Papalas, J., S82
Papaver somniferum, downy mildew, epidemic analysis, symposium, 752
Papaya ringspot virus
—geographic strains: resistance, cover photo, January; resistance in coat protein, 112
—on weeds, in Puerto Rico, S25
Pappu, H. R., S69
Paradornuwat, A., S50
Paris, R. L., S61
Parisi, L., 1496
Park, E., S69, S105
Park, J., S27
Park, S. M., S45, S69
Park, S.-Y., 1378
Park, Y., S69, S105
Parke, J. L., S93
Parker, K. C., S8
Parker, P. E., S9, S70
Parker, S. R., 1329
Parkhill, J., S39
Parry, D., 364
Partridge, D. E., S70
Partridge, J. E., S26
Pascholati, S. F., S4
Paspulum, nematodes, susceptibility, S36
Pasquali, M., S70
Pasteuria penetrans, *nematode relations, on golf greens, S135*
Pastor-Corrales, M. A., S70
Pataky, J. K., S13, S46, S112
Pathogens, population study, parameter measure with multilocus correlation, letter to editor, 1464
Patocchi, A., 493
Paul, P. A., S70
Paulitz, T. C., 867, S77
Pauls, K. P., 712
Pauls, K. P., S97
Paulsen, I., S107, S108
Payne, G. A., S24
Payton, M., S76
Pea
—Aphanomyces root rot, PCR assay, S86
—calico, vector transmission, S44
—Fusarium root rot, resistance sources, S30
—nonhost resistance response, comparison in animal cells, S108
—root rot, biocontrol with *Clonostachys rosea*, 329
—virus resistance in transgenic plants, S24
Pea enation mosaic virus, on transgenic pea, S24
Peach
—canker, sporulation, temperature and moisture effects, 1165
—chitinase, glucanase, and lyase induced in, by UV treatment, 349
—Ilarviruses, horizontal spread in orchards, S130
—rust: fungicides and management, S130
—scab, conidial dissemination and infection, 1581
—Sharka disease, spatial pattern analysis in France, 1543
Peanut
—aflatoxin contamination: field factors, S10; phytoalexins and resistance, S31
—calcium nutrition effect on disease, S76
—Cylindrocladium black rot, metam sodium and axoxystrobin applications, in Georgia, S123
—disease management, AU-input advisory, S44
—early leaf spot, maize intercrop effect, S10
—irrigation, disease management, S78
—leaf spot and southern stem rot, cropping frequency and severity, S32
—Pythium pod rot, irrigation effect, S48
—Sclerotinia blight, epidemiology factors, S80
—*Sclerotinia minor*: detached part susceptibility, S80; genoype, tissue, and isolate effects, S125; resistance, transgenic plants, S16
—southern blight, field resistance, S60
—southern stem rot, spray advisories, S125
—spotted wilt, vulnerability, S115
—tebuconazole application, air and ground sprays, S11
—*Tomato spotted wilt virus* on, resistance evaluation, S64
Pear
—blight, genetic analysis in Japan, 1393
—bull's eye rot, etiology and epidemiology, S35
—fire blight: biocontrol, temporal dynamics, 727; diagnostic medium and sampling procedure in orchards, 931; warning system in Israel, 356
—postharvest fruit rot, Washington, S92
Pecan, bark canker, unknown etiology, S73
Peck, A. R., S124
Pedraza, F., 88
Peever, T., S16, S107
Peltamigratus christiei, on turfgrass, other nematode comparison, S19
Peng, Y.-L., S70
Penicillium spp.
—on stored orange fruit, ozone for control, S69
Penman, L. N., S70
Pennisetum glaucum, on striga, resistance, S90
Pensuk, V., S64
Peoples, K., S114
Pepino mosaic virus, detection and characterization, S57
Pepper, anthracnose:
—fungicides, S124
—isolate characterization in Virginia, S58
Pepper golden mosaic virus, isolate variation, begomovirus complex, S38
Pepper huasteco virus, *Pepper golden mosaic virus* interaction, 270
Pepper mottle virus, systemic infection, resistance nature, S34
Peres, N. A. R., S70
Perez, B. A., S71
Pérez-Laorga, E., 485
Perkins, J. M., S112
Pernezny, K., S74
Peronosclerospora sorghi, on sorghum, metalaxyl treatment, Texas, S39
Peronospora arborescens, on oilseed poppy, in Australia, epidemic, symposium, 752
Pesic, Z., S85
Pest management
—insect, communication, S116
—vectors, international development issues, S116
Pesticides, residue, reduction in export crops, S116
Peters, D., 96, 1223
Petersen, Y., S71
Peterson, C. J., S129
Peterson, D. L., S40
Peterson, G. L., S10
Peterson, P. D., 381, S71
Pethybridge, S. J., S71
Petnicki-Ocwieja, T., S108
Petrillo, M. D., S76
Pfammatter, W., 493
Pfender, W. F., 467
Pfister, S. E., S134
Phaeoacremonium spp., on grape, teleomorph report, S129
Phaeocryptopus gaeumannii, on Douglas-fir:
—distribution in Idaho, S131
—quantification methods, 121
—severity prediction in Oregon, 790
Phaeosphaeria nodorum, on wheat, triticale, and rye, pathogenesis, S90
Phakospora pachyrhizi, on soybean, world production and year-round establishment, S71
Phaseolus spp. (see also Bean): *Pseudomonas syringae* in phyllosphere, factors, 1082
—*P. vulgaris*: angular leaf spot, integrated management strategy, in Canada, S14; disease resistance, gene analogs, 88; halo blight, nontoxigenic strains, Spain, 1553; two new begomoviruses, 774
Pheasant, J., S121
Phialophora gregata, on soybean, two races, characterization in north-central USA, 901
Phillips, L. L., S71
Phillips, P. A., S19
Philogène, B. J. R., 712, S97
Phlox, potexvirus on, characterization, S32
Phoma sclerotioides, on alfalfa, disease reaction, S36
Phomopsis spp., on cotton, species comparison on soybean, S69
—*P. amygdali*, on peach, sporulation, temperature and moisture effects, models, 1165
—*P. obscurans*, on strawberry, visual estimation reliability, 995
—*P. vaccinii*, on cranberry, upright dieback, S14
—*P. viticola*, conidial release, pattern in New York, S82
Phylloplane, microbial population dynamics, leaf as determinant, S91
Phyllosphere
—bacteria: expression technology, S106; gene expression, S106
—flow cytometric application, S106
—laboratory model, effectiveness, S106
—microbial diversity, challenges, S106
—microbial interaction, microscopy, S105
—microbial populations on plant surfaces, S105
—*Pseudomonas syringae*, bean, factors, 1082
—space and time translation, S106
—spatial distribution, S106
Phytophthora spp.: on citrus, PR-4 protein, S17; on floriculture crops, etiology, S118; on floriculture crops, in North Carolina, S38; on fruit and nut crops, genetic diversity, S8; fungicides, novel, microbioassay, 46; morphological and molecular characterization, integration, S1; on oak, molecular marker systems, S58; on ornamental plants, species characterization, S23; population decline from retention pond, S36; species origin, hybridization role, S98; waterborne, temperature effect on cyst germination, S68
—*P. capsici*: on chile, soil salinity effect, S75; genetic diversity of isolates, S10; genetic variation in Illinois, S84; host range in Illinois, S83; mefenoxam sensitivity, in New Jersey, S26; on pepper, management, S22; on pepper, mefenoxam sensitivity, S133; on pumpkin, genetic diversity and variation, S39; soil dispersal, agroecosystems, S53; in vegetable farms, weed association, S27
—*P. cinnamomi*: on avocado, suppression in soil, S129; on woody plants, clonal lineages in Australia, 695
—*P. cryptogea*, on witloof chicory, biosurfactants, S19
—*P. infestans*: A1 mating type loci, DNA marker, S50; freezing tolerance, genotypes, 1400; molecular evolution, S30; on petunia, factors, S7; on potato, irrigation, aerial photography for spatial pattern analysis, 805; on potato, metalaxyl, China, S31; on potato, population variation, Nepal, 236; on potato, resistance

factors, 666; soilborne vs. aerial populations, in central Mexico, S25; on *Solanum* spp., in Mexico, 382; spore showers in highland tropics, S28; virulence variation, asexual progenies, 293
—*P. inflata*, host range, S82
—*P. nicotianae*: in irrigation water, detection with PCR, 822; on weeds, in nurseries, S125
—*P. parasitica*: in composted swine waste, suppression, S26; on tobacco, elicitin-induced protection, cytology, 1308
—*P. ramorum*: conflicts with researcher and the public, S121; on oak, associated vegetation in Oregon, S93; on oak, detection method in plant tissue, ribosomal DNA, S47; on oak, detection using PCR, S8; on oak, factors, S12; on oak, resistance, S84; sudden oak death cause, host range, S28; survey in Oregon, S68
—*P. sojae*: on soybean, characterization using PCR, S54; on soybean, defense-related genes, S87; on soybean, major soybean Rps genes, Illinois, S56; on soybean, race changes in Iowa, S66
—*P. tritici-repentis*, race 8, in North America, S4
Phytoplasma
—ash yellows, aggressiveness in North Dakota, S88
—aster yellows epidemic, molecular analysis, Texas crops, 1368
—aster yellows group, insertion sequence, S49
—*Candidatus* Phlomobacter fragariae, on strawberry, in French fields, 644
—coconut, lethal yellowing, carbohydrate metabolism, 976
—on oak, campion, thistle, and dandelion, RNA interoperon sequence heterogeneity, S124
—on tobacco, elicitin-induced protection, cytology, 1308
Phytosanitary Alert System, North American Plant Protection Organization, function, S6
Piçarra-Pereira, M. A., 1505
Pichia anomala, on apple, biocontrol role, exoglucanase-encoding gene, 1145
Pierce, M. L., 1204, S7
Pierson, E., S108
Pierson, L. S., III, S108
Pietravalle, S., 1329
Pigeonpea sterility mosaic vector, mite transmission, divided RNA genome, 71
Pilcher, C. D., S46
Pine
—loblolly: decline in Alabama, soil factors, S35; fungal elicitors, S44; fusiform rust, growth effect, S88
—longleaf, prescribed burning effects, S68
—stem rust, Cytochrome P-450 genes, molecular analysis, S41
Pingel, R. L., S25
Pinon, J., 421
Pinus spp., Scleroderris canker, phenols, pectin, and callose involvement, S135
—*P. banksiana*, rust and mycoparasite, S136
—*P. monticola*, blister rust, resistance gene Cr2, origin, 691
—*P. nigra*, Sphaeropsis tip blight, detection with PCR, 1471
—*P. radiata*, Dothistroma needle blight, hyperspectral imagery for assessment, 1524
Pioli, R. N., 136
Pistachio, panicle and shoot blight, risk assessment in California, S62
Pitluck, H. M., S121
Pittman, R. N., S60
Pivonia, S., S71, S103
Plant doctor
—diagnosis, control, S122
—what is it? S122
Plantegenest, M., 1217
Plasmopara halstedii, on sunflower, structural and immunochemical changes, 1023
Platt, H. D., S116
Plaza, P., S69
Pleosporaceae, mating type genes and breeding system, S98
Ploetz, R. C., 916, S71
Plourde, K., S135
Plum, brown rot, IPM system, S128
Plum pox virus
—host adaptation and memory, S100
—on peach, spatial pattern analysis, 1543, S19
Pocasangre, L., S96
Podosphaera spp.
—*P. macularis*, on hops, temperature and infection severity, 1587
—*P. xanthii*, on cucurbit, strobilurin fungicides, resistance, S59
Poe, S., S121
Poinsettia, Pythium root rot, biocontrol, S8
Pokorny, J., S42
Polashock, J. J., S72
Poling, E. B., S25
Polityko, V., S9, S38
Polymorphism, analysis, pathogen identification, S124
Polymyxa graminis, soilborne virus vector, 1131
Pomella, A. W., S20
Ponciano, G., S53
Pond, E., S129
Pons-Kühnemann, J., 305
Poplar
—abscisic acid, water stress and compartmentalization, S135
—hybrid, leaf rust, leaf disk bioassay, 421
—leaf rust, molecular epidemiology, S132
Populus spp., canker disease epidemic, in Wisconsin, S89
Porchas, M., S58
Porter, D., S48
Porter, J. K., S6
Postharvest disease, key to identification, onion metabolites, S72
Postharvest pathology
—apple diseases, biocontrol with yeasts, oxidative stress, 564
—apple fruit decay, control with *Candida saitoana*, 344
—*Candida sake* for apple fruit disease, 436
—peach UV-C treatment, chitinase, glucanase, and lyase induced by, 349
Postnikova, E. N., S2, S76
Potato (see also *Solanum* spp.)
—bacteria, differentiation of, oligonucleotide array, 262
—common scab, streptomycete variation, S89
—disease diagnostics, Brazil, S111
—dry and soft rot of tuber, specific metabolites, S55
—early dying, soil factors, multiple linear regression to model, S67
—famoxadone and cymoxanil for control, S78
—late blight: alleles and epidemic relation, S107; chitosan/copper applications, S31; Global Initiative, S116; irrigation, spatial pattern analysis, aerial photography, 805; population variation, Nepal, DNA polymorphisms, 236; resistance factors, 666; tuber rot, foliar fungicides, S67; virulence variability, 293
—pink-eye, S67
—Rhizoctonia disease, biocontrol and ryegrass rotation, S11
—*Rhizoctonia solani*, anastomosis group 3, North Carolina, 610
—scab, phytotoxin, bacterial nitric oxide synthase, S44
—Sclerotinia stem rot, Washington, S43
—silver scurf, chlorine for control, S85
—soilborne diseases, biological products and green sprouting, S48
—soilborne pathogens, *Brassica* crop rotation, S48
—*Streptomyces turgidiscabies*, mobile pathogenicity island, S13
—viruses: detection by RT-PCR, S2; emerging and re-emerging, S101
Potato mop-top virus, detection in seed potato, RT-PCR, S92
Potato spindle tuber viroid, on tomato, host components, S32
Potato virus Y
—on potato, molecular characterization, S78
—virus movement in tubers, patterns and timing, S30
Potebniamyces pyri, on pear, distribution in Pacific Northwest, S92
Potting media, biocontrol agent substrate, S118
Powell, W. A., S52
Powelson, M., S67
Prabhu, A. S., 256
Pratt, R. G., 1565, S72
Pratylenchus spp.: on field crops in Australia, S36; on field crops, Pacific Northwest, S125; on wheat, genetic tolerance, S79
—*P. penetrans*: on alfalfa, resistance affected by oryzacystat I and II, 799; on pyrethrum, in Australia, S34
Press, C., S72, S108
Pria, W. D., Jr., 953
Primula, commercial hybrid, *Botrytis cinerea* seed infection, latent disease spread, 573
Prithiviraj, B., S55, S72
Pritts, M. P., S84
Private practitioners
—getting started, S120
—insurance, disease losses, S120
—nonscientific issues, S120
—science and consulting, people problems, S120
—university and regulatory agency, interfacing, S120
Procunier, J. D., 167
Prune dwarf virus, in almond, reverse transcription-PCR, 278
Prunus spp., brown rot, latent infection and threshold conditions, 102
Prusky, D., S105
Pruvost, O., 832
Pryor, B. M., S36, S59, S72, S99, S128
Pseudomonas spp.: on conifers, antibiotics produced in rhizosphere, PCR-based detection, S132; take-all decline soils, antibiotic production, 54
—*P. aeroginosa*: host range in plants and animals, mechanisms, S107; on lettuce, seed germination and seedling growth, S52; on tomato, *Ralstonia solanacearum* relation, S53
—*P. cichorii*, on coffee, distribution in Puerto Rico, S75
—*P. corrugata*, nonpathogenic mutants, biocontrol agents, S73
—*P. fluorescens*: biocontrol agent, gene expression profile, S72; biocontrol agent for pear, temporal dynamics, 727; genomics and biological control, S108; PCR detection of phenotypes, S20; on pear and apple, iron bioavailability, S82; pyoluteorin from, biocontrol agent, S11; root colonization, genes, S58; in wheat rhizosphere, 2,4-diacetylphloroglucinol-producing strains, interactions, 982
—*P. huttiensis*, on tomato, new in greenhouse, S66

—*P. putida*, Fusarium wilt of radish controlled by, 626
—*P. savastanoi*, on olive, RNA viruses, detection, reverse transcription-PCR, 286
—*P. syringae*: on bean, nontoxigenic strains, Spain, 1553; on cereals, glume rot in Russia, S9; leaf environment response, cell size reduction, 1209; pathogenicity and genomics, S108; on *Phaseolus vulgaris*, spread in phyllosphere, factors, 1082; recombinant mutants, legel impediments, S120; RND transporter, characterization, S43; syringopeptin produced by, factors, S88; on tomato, genomics, sequences, S110
Pseudoperonospora humuli, outbreaks in crops in Argentina, S71
Puccinia spp., rusts on daylily and geranium, fungicide effect, S63
—*P. allii*, on leek, inoculum density and temperature effect, germination, 413
—*P. coronata*, on oat, seedling resistance, quantitative trait loci, 860
—*P. graminis*: population changes in Minnesota, S71; on ryegrass, infection prediction, degree-hour wetness duration, 467
—*P. hordei*, on barley, molecular mapping of resistance gene, 604
—*P. lagenophorae*, on groundsel, biocontrol concerns, S123
—*P. striiformis*, on wheat: gene markers, 881; resistance and molecular markers, 153
—*P. triticina*: on wheat, gene markers, 881; on wheat, molecular markers, 153
Puchalski, B., S54
Puckhaber, L. S., S37, S90, *1606*
Pumpkin
—Fusarium fruit rot, cover crop mulches, S91
—spray programs and cover crop effect, S17
Punja, Z. K., S69
Purcell, A. H., 244, 675
Purteka, G., S84
Purugganan, M., S84
Puthoff, D. P., S59
Putter, T., S49
Pyrenopeziza brassicae, on oilseed rape, epidemic development in United Kingdom, 657
Pyrenophora tritici-repentis, on wheat:
—novel isolates, S3
—Ptr ToxA sensitivity, 397
—two races and one-to-one relation, 391
Pyricularia grisea
—on *Lolium perenne*, temperature and leaf wetness duration, model, 336
—on ryegrass: USA and Japan comparison, S86; vegetative compatibility assay, USA and Japan comparison, S87
—strobilurin resistance, gene mutation, 891
Pythium spp.: on bermudagrass roots, stems, and leaves, in Florida, S81; on carrot, molecular characterization in California, S24; 2,4-diacetylphloroglucinol effect, sensitivity variation, 966; in greenhouse, diversity and pathogenicity, S125; identification using AFLP, S124; population genetic studies, AFLP markers, S28; in wheat fields, communities, Washington, 867
—*P. aphanidermatum*, on turf, fungicide resistance mechanism, target site, S67
—*P. festivum*, on corn, morphological and molecular characterization, S1
—*P. oligandrum*, on sugar beet and wheat, defense reactions, cell wall protein fractions, 1228

Qin, Q. M., S70
Qin, X., 953
Qiu, W., S68
Qualle, S., S10
Quayyum, H. A., 323
Quercus spp. (see also Oak)
—bark canker and drippy nut, characterization in Spain, 485
Quiot, J. B., 1543, S19

Raaijmakers, J. M., 54, 966
Radewald, K. C., S129
Radish
—bacterial leaf spot, compost rhizobacteria, severity suppression, 1292
—Fusarium wilt, biocontrol with *Pseudomonas putida*, 626
Radopholus similis, thermotolerance induced, absence, S4
Ragatz, R., S72
Rahme, L. G., S107
Rains, G. C., S42
Rajagopalan, R., S22
Ralstonia solanacearum
—on geranium, race 3, biovar 2, S65
—on ginger, molecular diversity in Hawaii, 1124
—on potato: detection of race 3 in tuber, S68; virulence and diversity in Russia, S58
—secretome role in pathogenesis, S30
—on tomato, chemotactics and virulence, S93
Ramarathnam, R., S72
Ramesh, C. R., 176
Ramirez, H., S90
Ramming, D. W., 1263
Ramon, M. P., S135
Rampersad, S. N., 1153
Randal Schadel, K., S62
Randhawa, N. K., S72
Randhawa, P. S., S72
Rangel, Y., S73
Rasabandith, S., 147
Rascon, J., S37
Rasmussen, J. B., 397, S3
Raspberry, decline, aphid-transmitted virus, S32
Raspberry bushy dwarf virus, resistance, S58
Rathayibacter toxicus, on annual ryegrass, toxicity and strains, S2
Rayside, P. A., S81
Rebordinos, L., S14
Reddy, D. V. R., 71
Reddy, J. D., S73
Reddy, M. S., 1301, S117
Reddy, R. (New Jersey), S108
Reddy, R. K. (India), S65
Redinbaugh, M. G., S73, S84, S87
Reedy, R. M., S73
Reeleder, R. D., 1533
Regnault-Roger, C., 712, S97
Regulatory programs, legal problems, S121
Rehms, L., S68
Rehner, S. A., S61
Reid, L. M., 712, S97
Reilly, C. C., S66, S73
Reimann, S., S73
Reinsel, M. D., S32
Remick, A., S107
Renderos, W. E., S35
Resistance
—alfalfa to root-lesion nematode, oryzacystat I and II effect, 799
—apple to scab: field resistance, mapping, 493; *Trichoderma* chitinase effect, 1496
—barley to leaf rust, molecular mapping of gene, 604
—bean to *Bean common mosaic necrosis virus*, NL-3 K strain, 683
—bermudagrass to dematiaceous hyphomycetes, leaf inoculation technique, 1565
—durability, measures of, 616
—grape to: *Botrytis cinerea*, resistance correlations, 1263; powdery mildew, ontogenic, 547, 556
—melon to *Curcurbit yellow stunting disorder virus*, reduced virus accumulation, 844
—oat to crown rust, seedlings, quantitative trait loci, 860
—papaya to *Papaya ringspot virus*, coat protein gene, 112
—pathogens to bean, resistance gene analogs, 88
—pepper to thrips, *Tomato spotted wilt virus*, 96
—plant virus durability, analysis, 941
—poplar to leaf rust, bioassay, 421
—potato to late blight, resistance factors, 666
—rice to: bacterial blight, gene mapping, 1258; bacterial blight, inheritance in 21 cultivars, 147; blast, *Pi-ta* locus, 1452
—wheat to: Fusarium head blight, multienvironment trial, 1068; leaf rust, 784; leaf and stripe rust, durable, 153; powdery mildew, silicon role, 402; Septoria tritici leaf blotch, 1158
—white pine to blister rust, gene Cr2, 691
Reviewers, acknowledgment of, 4
Reyna, N. S., S73
Rhizobacteria
—asparagus, Fusarium crown and root rot effect, NaCl, 186
—radish bacterial leaf spot suppressed by, in compost, 1292
Rhizobium leguminosarum, on pea, mutant effect on nodule development, S34
Rhizoctonia spp.: in soil, wheat cover crop effect, S43
—*R. solani*: on bean, mycorrhizal biocontrol agent, glucanase, S136; on cowpea, resistance evaluation, S8; on creeping bentgrass, new subgroup in North Carolina, S1; in impatiens, composted potting mix effect, 1115; on potato, anastomosis group 3, population migrants, 610; on rice, blight lesions, cover photo, March; on rice, growth stage and silicon effect, 256; on soybean, ribosomal DNA polymorphism, S25; on tobacco, resistance screening, S23
Rhodes, L. H., S5, S83, S91
Rhopalosiphum padi, *Barley yellow dwarf virus* vector, yield loss prediction from, 1217
Rhynchosporium secalis
—on barley and rye, speciation, S53
—sexual reproduction, evidence, S53
Rice
—bacteria to elicit resistance, hypersensitivity, S94
—bacterial blight: resistance and gene mapping, 1258; resistance inheritance in 21 cultivars, 147; strain interactions, antagonistic, 705
—blast: defense response genes S40; durable resistance, S113; durable resistance, QTL characterization, S54; ethylene role in resistance, S79; hypoxia root zone, field resistance, S49; *Pi-ta* locus, variation, 1452; resistance and marker assisted selection, S41; resistance genes in Colombia, S18; silicon effect, ultrastructure and cytochemistry, 535
—defense response genes, PCR-based screening strategy, S57
—false smut, management in Nigeria, S3
—MAP kinase, molecular characterization, S73
—phytoalexins, diterpenoid accumulation, S74
—*Rhizoctonia solani*, isolate diversity, S40
—sheath blight, growth stage and silicon effect, 256
—transgenic: ethylene insensitivity, suppression by *EIN-2* ortholog, S95; jasmonate insensitive, generation, S60

Rice dwarf virus, Korean isolate, RNA analysis and sequence, S49
Rich, J. R., S46
Richard, J. L., S99
Richardson, B. A., S73
Richardson, P. A., 822, S36, S47, S125
Richins, R., S84
Rick, S., S58, S78
Rico, A., 1553
Rideout, S. L., S123, S125
Riedel, R. M., S91
Riegel, D. G., S90, S91
Riley, M. B., S18
Riley, T., S12, S59
Rimé, D., 1437
Rimelspach, J. W., S83
Rimmer, S. R., 959
Rioux, D., S135
Rioux, S., S6
Rippy, R. C., S74
Ristaino, J. B., S30, S53
Ritchie, D. F., S68
Rivas-Davila, M. E., S32
Rivera, L., S74
Rivera-Bustamante, R. F., 270, S109
Rizzo, D. M., S28
RNA silencing, antiviral defense in plants and animals, S107
Robarge, W. P., S10
Robert, R., 1023
Roberts, D. P., S125
Roberts, P. D., S27
Robertson, C. L., S74
Robertson, D., S109
Robinson, C., S48
Robinson, P. E., S74
Robison, D. M., 1165
Rodermel, S. R., S59, S91
Rodger, S., 1111
Rodrigues, F. Á., 256, 535, S74
Rodriguez, R., S75
Rodríguez-Alvarado, G., S25
Rodriguez-Kabana, R., S81
Roelfs, A. P., S71
Rogers, J. D., S92
Rogers, P. M., S74
Rogers, R., S102
Rojas, M. R., S109, S111
Rolland, D., S14
Rollins, J., S38, S105
Rolshausen, P. E., S129, S130
Ronald, P., 705
Rooney, S. N., S129
Roper, M. C., S74
Rosales, M. I., S86
Roscoe, J., 1233
Rose, rosette disease, spread in southeastern USA, S124
Rosenzweig, N., S75
Rosskopf, E., S75, S92
Rosso, P. H., 790
Rothrock, C. S., S40
Rotylenchulus reniformis
—on cotton, seasonal variation in Mississippi, S49
—tillage and crop sequence effect, depth distribution, 1182
Roumbos, C., S45
Rouse, D. I., S26, S27
Rowden, J., S10
Roy, A., S19, S57, S75
Roye, M. E., S75
Ruegg, D., S3
Ruhl, G., S122
Ruhnke, P., S67
Rungrassamee, W., S135
Rupe, J. C., S125
Rush, C. M., 720, S81
Rutger, J. N., S40
Ryba-White, M., S57
Ryder, E., S29
Ryegrass
—gray leaf spot, field resistance to strobilurin fungicides, 891
—stem rust, degree-hour wetness duration, infection prediction, 467
Rytter, J., S40
Ryu, C.-M., 1301, S117

Saad, A. T., S2
SADIE, disease epidemics, spatial dynamics, statistics study, S92
Saftner, R. A., S50
Saguy, I. S., 1247
Sahin, F., 64
Sakadzic, S., S130
Salam, M. U., 1073
Salar, P., 644
Salas, B., S75
Salazar, L. F., S101
Saleh, A. A., 853
Salicylic acid, binding protein and disease resistance, S47
Salih, S. S., S51
Sallam, M. A., S2
Samac, D. A., 799
Sams, C. E., S11
Samuels, G. J., S20
Sances, F., S120
Sanchez, L., S75
Sanogo, S., S14, S75, S104
San Segundo, B., 1344
Santamaría, J. M., 976
Santos, F. A., S82
Santoso, A., S75
Sarrocco, S., S104
Satellite panicum mosaic virus, in millet, host-specific movement, S68
Saucier, M., S107
Saude, C., S76
Savelle, A. T., S76
Schaad, N. W., S2, S9, S25, S38, S50, S58, S65, S68, S72, S76
Schaff, J. E., S76, S108
Schardl, C. L., S97, S98
Scheef, E. A., S72, S76
Scherm, H., S18, S65, S76, 1581
Schiff, N. M., S90
Schilder, A. M. C., S76, S90
Schilling, J. S., S77
Schindelbeck, R. R., 1131
Schisler, D. A., S17, S79, S86, S94, S117
Schmale, D. G., III, S77
Schmidt, D. J., S28
Schmidt, R. A., 1037, 1048
Schnabel, G., 1354, S12, S23, S113
Schneider, D. J., S108
Schneider, J. K., S82
Schneider, R. W., 1014, S13, S74
Schneider, S. M., S77
Schneider, W. L., S100
Schnell, R. J., S71
Scholl, E. H., S76, S108
Scholthof, H. B., S95
Scholthof, K.-B. G., S68
Scholz, U. M., S77
Schrader, K. K., S68
Schroeder, B. K., S77, S108
Schroeder, K. L., S77
Schumann, G. L., S132
Schuster, G., S48
Schwartz, H. F., S29
Schweitzer, P. A., S51
Science and law, expert witness, S121
Sclerotinia spp.: biocontrol agents against, Arizona, S72; sclerotia, germination, soil moisture and temperature, 443
—*S. homoeocarpa*: on *Agrostis* sp., biocontrol, S89; on bentgrass, isolates, S41; genetic diversity, turfgrass species and location, S39; *Ophiostoma novo-ulmi* virus, specificity, hypovirulence, 1407
—*S. minor*: on winter wheat, mycelial interaction, S36; on temporal and spatial dynamics, irrigation and tillage effects, 1572
—*S. sclerotiorum*: apothecia, Salinas Valley, California, S131; ascus maturation, incubation, S70; on canola, biocontrol with *Bacillus*, S94; cell wall degrading enzymes, repression and regulation, S38; genetic variability and outcrossing, Washington, S42; on soybean, in north central USA, Bayesian logistic regression, symposium, 758
Sclerotium rolfsii
—on *Pulmonaria* and *Astilbe* spp., new hosts, S23
—survival overwinter, in Iowa, S22
Scoggan, A., S128
Scott, D., S128
Scott, J. B., 752
Scott, S., S41
Scuimbato, G., S68
Sears, J. L., S54
Secor, G. A., 293, S67
Seebold, K. W., Jr., S20, S77
Seem, R. C., 547, 556, S28, S44, S60
Seifers, D. L., S78
Seifert, K. A., 1533, S6, S15
Seijo, T. E., S61, S74
Senesac, A., S123
Senseman, S. A., S104
Septoria tritici, on winter wheat, epidemics, weather models, 1329
Serce, S., S79
Serlemitsos, K., 336
Serratia marcescens, on cucurbit:
—genomic comparison, S94
—genotyping, techniques, 1240
—yellow vine disease, phylogeny, 1233
Setaria italica, crosses with wheat, *Magnaporthe grisea*, host specificity, 42
Seth, D., S78
Settlage, S. B., S109
Settle, D., S78
Setubal, J., S108
Sewake, K. T., S43
Seyran, M., S61
Shah, D. A., S78
Shamoun, S. F., S104
Shank, K., S100
Shaw, D. S., 236
Shaw, J. N., S10
Shaw, M. (New Mexico), S84
Shaw, M. W. (U.K.), 573, 1329
Shearer, B. L., 695
Shen, Y., 705
Shepherd, C., S58, S78, S90
Sherman, D. J., S100
Sherrier, D. J., S31, S34
Sherwood, J. E., S7
Sherwood, J. L., S5, S64
Shew, B. B., S10, S36, S54, S80, S125
Shew, H. D., 610, S23, S26, S94
Shibli, R., S3
Shiel, P. J., S2, S78
Shields, E. J., S77
Shilts, T., S17
Shim, H. K., S43, S66

Shim, W. B., S78
Shimerling, O., S81
Shin, M. S., S66
Shishkoff, N., S59, S125, S135
Shlevin, E., 1247, 1320
Sholberg, P. L., S66, S79
Shollenberger, L. M., S52
Shoseyov, O., S81
Sh. Pekhtereva, E., S58
Shtienberg, D., 356, 931, 1320
Shuster, J. R., S114
Shwartz, H., 356, 931
Sica, C. J., S135
Sierotzki, H., S113
Sievert, J. R., S57
Sikora, L. J., S14
Sikora, R. A., S45, S73, S77, S96
Silva, C., 278
Sim, T., IV, S10
Simard, M., S135
Simón, B., 1422
Simpfendorfer, S., S3
Simpson, C. R., S12
Sims, J., S77
Sin, S. H., S79, S99
Singh, M. P., S49, S79
Singh, P., S40
Singh, R. P., 153, 881, S112
Singh, S. (Kansas), 784
Singh, S. P. (Idaho), 683, S81
Sinorhizobium meliloti
—genetic manipulation, S77
—*Rhizobium* comparison, symbiosis, S108
Sipes, B. S., S4
Sirococcus conigenus
—on conifers, morphology, S12
—host-related groups, molecular markers, S80
Skalchunes, A., S114
Skantar, A. M., S2
Skaria, M., S61
Slattery, M., 46
Slininger, P. J., S79, S86
Smart, J. R., 1182
Smigocki, A. C., 799
Smilanick, J. L., 1263, S57, S61, S69, S105
Smiley, R. W., S79, S125, S129
Smith, A. M., S28
Smith, B. J., 219, S79
Smith, D. L., S80, S125
Smith, D. R., S80
Smith, H. J., S80, S130
Smith, J. J., 1393
Smith, J. P., S43
Smith, K. N., S75
Smith, R. B., 391
Smith-Becker, J., S128
Sniezko, R. A., 691
Snover, K. L., S121
Sobolev, V., S31
Soderlund, C., S40
Sohi, H. S., S72
Soika, M. D., S86
Soil fumigation, methyl bromide, vine, tree, and berry field nurseries, S77
Soil solarization: snapbean damping-off, furfural or urea amendment, S81; soilborne pathogens, survival modeling, 1247
Soil suppression, *Heterodera schachtii*, oligonucleotide fingerprinting, 1006
Solanum spp. (see also Potato), cultivated and wild, *Phytophthora infestans* population structure, in Mexico, 382
—*S. tuberosum*, osmotin genes, sequence analysis, S28
Song, S. B., S36, S37
Sorghum
—anthracnose, pathosystem, S111
—grain mold, dew and incubation temperature, S65
Soria, S., 485
Sorrells, M. E., S13
Soto, M. J., 478
Soto-Estrada, A., S130
Souza, A. A., S82
Souza, N. L., S25, S70
Souza-Dias, J. A. C., S111
Soybean
—*Bean pod mottle virus* on, resistance, S95
—brown stem rot, race distribution in north-central USA, 901
—Cercospora leaf blight, resistant cultivars, S13
—charcoal rot, disease assessment, S61
—cyst nematode, Geldanamycin effect on, S2
—defense-related genes, *Arabidopsis* comparison, S59
—green stem incidence, variability in cultivars, S35
—iron-deficiency chlorosis, soil factors in Minnesota, S16
—northern stem canker, field trials in South Dakota, S15
—*Phytophthora sojae*, inoculation technique, S65
—pod and stem blight, variability in Argentina, characterization, 136
—root diseases, glyphosate effect, S104
—root rot pathogens, molecular detection, S6
—Roundup Ready, soil effect, S104
—rust: biology and history, S102; breeding programs, history, S103; control in South Africa, S103; defense-related genes, S16; epidemic in Brazil and Paraguay, S103; molecular detection, S102; protein profiles, S55; risk in USA, S103; strategy to minimize establishment, S103
—Sclerotinia stem rot: genetics and QTL identification of resistance, S88; in north central USA, Bayesian logistic regression, symposium, 758
—stem canker, epidemic in South Dakota, S94
—sudden death syndrome: fungi and tissue of taproots, S92; inoculation technique, S65; molecular basis, S40
—viruses, distribution in Ontario, S62
—white mold, genomic analysis of resistance, S17
Soybean dwarf virus, aphid vector specificity, readthrough domain relation, 1560
Soybean mosaic virus
—biological diversity of isolates, S25
—evolutionary analysis from clones, S78
—resistance genes, virus tracking movement, S25
—transgenic resistance, models, S103
Spadaro, D., S80
Spaide, R. G., S103
Spartina alterniflora, role in coastal Louisiana, S74
Spatial pattern, analysis, new method, S91
Spear, R. N., S60, S91, S106
Special session presentations, S97
Species concepts, collision, S93
Speck, J., S1
Sphaerellopsis filum, species complex, S65
Sphaeropsis sapinea
—in Austrian pine: defense responses, systemic, S55; detection with PCR, 1471
—on pine, *Agrobacterium*-mediated transformation, S26
—on red pine, resistance in fertilization, S9
Spiegel, Y., 127
Spinach
—*Stemphylium botryosum* and *Cladosporium variabile*, inoculum source, S22
—Verticillium wilt, in Washington, S22
—white rust, management and aphid relations, S21
—wilt, selective media, 1173
Spiranthes cernua, potyviruses on, detection, S30
Spiroplasma spp., leafhopper vectors, lectin binding to salivary glands, S89
—*S. citri*, mutants and variants, S64
—*S. kunkelii*, ATP-binding cassette protein, S95
Spotts, R. A., S35
Springer, P. S., 35
Spurr, H. W., Jr., S80
Stack, R. W., S80
Stagonospora sp., bindweed control by, S3
—*S. nodorum*, on wheat, partial resistance mapping, S124
Stall, R. E., 1415, S62
Stall, W. M., S63
Stanford, M., 1524
Stanger, C., S67
Stanghellini, M. E., S129
Staniulis, J., S124
Stanley, L., S24
Stanley, M., S121
Stanosz, G. R., S12, S80, S89
St-Arnaud, M., 229, S132, S136
Starner, V. R., S83
Steadman, J. R., S70
Steddom, K., 720, S81
Steele, W., S90
Steffenson, B. J., 604, S100
Steigerwalt, A. G., 1240
Steimel, J., 901
Steinlage, T. A., S103
Stenger, D., S27, S38, S78, S99
Stetina, S. R., S16
Stevens, C., S81
Stevenson, J., S74
Stevenson, K. L., S34, S113
Stevenson, W. R., S74, S75
Stewart, E. L., S54, S81
Stewart, J. E., S133, S135
Stiles, C. M., S81
Stipanovic, R. D., S37, S90, *1606*
Stipes, R. J., S126
Stirling, G. R., S34
St-Michel, E., S136
Stockwell, V. O., S82
Stokes, S. C., S66
Stone, A. L., S100
Stone, C. (Australia), 1524
Stone, C. L. (Maryland), S102
Stone, J. K., 121
Strausbaugh, C. A., 683, 1430, S81
Strawberry
—anthracnose: pathogen variability and genetic diversity, 219; plant extract effect on conidiation, 1285; resistance evaluation, S79; temperature and wetness duration effect, 513
—black root rot, terbacil application, S48
—fruit rot and fruiting habit, S127
—fumigation strategy, remote sensing for evaluation, S57
—leaf scorch, photosynthetic response, S84
—marginal chlorosis, planthopper vector, in France, 644
—Phomopsis leaf blight, visual estimation reliability, 995
—root diseases, transplants, S25
—root rot, biocontrol amendments, S49
—Verticillium wilt, soil fumigant and plastic mulch effect, S33
Strawberry pallidosis virus, epidemiology and molecular characterization, S85
Street, K., S92

Strelkov, S. E., 391
Striga hermonthica, soil suppressiveness and rhizobacteria, in Africa, S3
Stromberg, E. L., S58, S125
Struik, P. C., 666
Stuart, G., S63
Stubbs, C. S., S4
Stubbs, V., 1111
Sturbaum, A. K., 382
Styer, W., S84
Stylosanthes spp., *Colletotrichum gloeosporioides*, genetic diversity and centers of origin, 176
Su, Z., S28
Subbarao, K. V., 443, S47, S70, S91, S127, S131, 1572
Subbotin, S., 1093
Sudarshana, M. R., S109
Suenaga, K., 881
Sugar beet
—Cercospora leaf spot, radiometric disease evaluation, S81
—*Pythium oligandrum*, cell wall protein fraction effect, 1228
—rhizomania, remote detection, 720
Sugar, D., S35
Sugarcane, nematodes, suppressive or conducive soils, 1437
Suh, D. Y., S38
Sukno, S., S81
Sulc, R. M., S5
Sun, Z., 1354
Sundick, B. M., S82
Sundin, G. W., 1393, S106
Sunflower, downy mildew, structural and chemical changes, 1023
Sung, S. S., S68
Sunter, G., S109
Suppressive soil
—*Pseudomonas* spp. in Dutch take-all decline soil, antibiotic producers, 54
—sugarcane, nematode ectoparsitism, soil comparisons, 1437
Supyani, S., S36
Suslow, T. V., 727
Sutton, T. B., 381, S30, S54, S56, S70, S71
Suzuki, N., S36
Swan, B. M., S130
Swart, W. J., S9
Sweet potato
—geminiviruses, detection by PCR, S51
—viruses, RT-PCR based method for identification, S55
Sweet potato chlorotic fleck virus, characterization, S5
Swingle, P. P., S94
Switras-Meyer, S., S82
Syringa spp., disease resistance, multiple, evaluation, S63
Szabo, L. J., S82

Tabiki, T., S65
Tai, T. H., S8
Tainter, F. H., 1056
Takata, K., S65
Takehara, T., 1173
Takenaka, S., 1228
Talavera, C., 976
Talbot, B. G., S6, S132
Tally, A., S17, S34
Tan, M., 1258
Tan, X., S110
Tang, X., S108, S110
Tang, Z., S49, S67
Tanguay, P., S134
Tans-Kersten, J., S4
Tanzer, M. M., S114
Tapesia spp.
—*T. acuformis*, genetic structure, Washington, 650
—*T. yallundae*, on wheat, J genome chromosome from *Thinopyum ponticum*, S50
Targon, M. L. P. N., S82
Taro, A., S82, S83
Taylor, D. R., S18
Taylor, J. H., 712
Taylor, S. P., S36
Taylor, T. V., S82
Teaching
—agricultural issues and social contexts, S119
—creative options, S119
—plant pathology, extreme, S119
Teasdale, J. R., S14
Tebeest, D. O., S52
Tedford, E., S17
Tedla, T., S76
Teixeira, A. R., 1505
Teixidó, N., 436
Tellez, M. R., S68
Temple, T. N., S82
Tenney, J., S56
Tenuta, A., S6, S62
Tenuta, M., S93
Terauchi, H., 1560
Tereso, S., 278
Tertuliano, M., S42
Tetragonia expansa, *Cucumber mosaic virus*, systemic infection and temperature relation, 1445
Teunissen, H. A. S., 1360
Thakur, R. P., S65
Thalouarn, P., 451
Thaveechai, N., S50
Thayer, C. L., S56
Thekopsora minima
—on hemlock, temperature effect on spores, S134
—on *Rhododendron*, infection process, S134
Theobroma cacao, witches' broom, scanning electron microscopy, S45
Thielaviopsis basicola
—on pansy, greenhouse plug trays and disinfectants, S89
—on petunia, phosphorus stress and disease, S45
Thies, J. A., S8, S82
Thomas, C. E., S42
Thomas, C. S., S120, S121
Thomas, S. L., S83
Thomashow, L. S., 982, S20, S58, S108
Thomma, B. P. H. J., S52
Thompson, D. C., S16, S83
Thon, M., S82, S83
Thorne, J. L., S30
Thorpe, D. J., S83
Thrane, U., S83
Tian, D., S83, S84
Tilletia spp.
—*T. fusca*, on fescue, mating system and genetic differentiation, S89
—*T. indica*, teliospore survival, in soil, S10
Timmer, L. W., 1031, S63, S70
Timper, P., S20
Tiquia, S. M., 1292
Tisserat, B. H., S44
Tisserat, N., S39, S78, S121
Tjosvold, S., S28
Tobacco
—black shank, soilborne fungi effect, S31
—cyst nematode, resistance and fumigation controls, S41
—disease/stress protection, animal and plant antiapoptotic genes, S105
—Erwinia soft rot, alkaloid conversion, S80
—ethylene-insensitivity, pathogen effect, 813
—*Phytophthora parasitica* or phytoplasma, elicitin-induced protection, 1308
—transforming genes in, resistance to cercosporin, S35
Tobacco mild green mosaic virus, hypersensitivity on soda apple, bioherbicide, S15
Tobacco ringspot virus, in *Xiphinema americanum*, transmission, S40
Tobacco streak virus, on strawberry, old or new virus, S85
Todd, J. C., S84
Todd, T., S39, S78
Tohme, J., 88, S54
Tolin, S. A., 524, S25, S56
Toman, C., S108
Tomato
—bacterial soft rot, chlorine dioxide gas treatment, S56
—bacterial spot, bacteriocin-like substances, race 3, 1415
—*Botrytis cinerea*, biocontrol and dot blot technique, S130
—coronatine treatment, transcriptional profiling, S86
—cover crop, compost, and manure effect, S14
—early blight, compost and compost tea effect, S47
—famoxadone-based fungicides, management, S90
—Fusarium wilt: near-isogenic strain, 1360; race 3 origin in California, 1014; and Verticillium wilt, DNA array for detection, S52
—leaf curl disease, begomovirus cause, India, 1485
—Phytophthora and Pythium damping-off, coconut coir dust for, S13
—*Pythium ultimum*, nematode and collembola effect, S94
—salicylic acid and hydrogen peroxide effect, S10
Tomato bushy stunt virus, P-22-host interaction, S95
Tomato golden mosaic virus, regulation, S109
Tomato leaf curl Gujarat virus, on tomato, new in India, 1485
Tomato spotted wilt virus
—acquisition by thrips, S5
—envelope glycoproteins, oligosaccharide composition variation, S64
—epidemic in North Carolina, on potato and cabbage, S1
—evolutionary biology, S99
—genetic drift and selection, S84
—*Impatiens necrotic spot virus*, mixed infections, weeds and tobacco, S58
—integrated management, S115
—IPM practices, vegetable production effect, S115
—on peanut, transformation, nonstructural gene, S64
—on pepper, thrips resistance, 96, 1223
—protein movement, visualization using polyclonal antibody, S31
—thrips and epidemiology, S115
—thrips transmission, genetics, S79
—on tobacco, incidence factors, S19
—worldwide problem, S101
Tomato yellow leaf curl virus
—biotechnology in management, Dominican Republic, S111
—coat protein, multiple functions, S109
Tomberlin, J. K., S42
Tomita, R., 42
Tommerup, I. C., 695
Tooley, P. W., S12, S58, S84
Torrance, R. L., S77

Torres-Pacheco, I., 270
Tory, D. R., S34
Tosa, Y., 42, S86
Tozzini, A., 136
Traquair, J. A., 323
Travis, J. W., S31, S40
Tredway, L. P., S1
Trichoderma spp., disease control, plant growth enhancement, pollution mediation, S104
—*T. atroviride*: on apple, scab resistance and chitinases, 1496; biocontrol agent, germination initiation effect on competitive capacity, 1593
—*T. hamatum*: on begonia, mildew and blight suppressed by, S37; biocontrol agent for radish bacterial leaf spot, 1292
—*T. stromaticum*, mycoparasite of cocoa witches' broom pathogen, genetics, S20
—*T. virens*: biocontrol agent, gene encoding protein, S21; biocontrol in gene pairs, S60
Trick, H., S94
Triticum spp.
—*T. dicoccoides*, chromosome 2A, *Fusarium* suppressed by, S80
—*T. timopheevii*, leaf rust resistance, transferred to wheat, 784
—*T. triticina*, on wheat, resistance transferred from *Triticum timopheevii*, 784
Troccoli, A., 1093
Troitsky, A. V., S9
Tronchin, G., 1023
Tronsmo, A., 1593
Trouillas, F. P., S130
Trout, T. J., S77
Troxclair, N., 1368
Trujillo, E. E., S130
Tsai, C.-W., S84
Tsang, M. M. C., S4
Tsompana, M., S84, S99
Tsror, L., S66
Tsygankova, S. V., S38
Tubajika, K. M., S84
Tudor-Nelson, S. M., 1415
Tumban, E., S84
Turechek, W. W., 458, 1587, S20, S84, S122
Turfgrass
—anthracnose: epidemiology, S112; management strategies, S112; new problems, S111; severity in mixed greens, S86
—disease control programs, fungicide runoff, S87
—gray leaf spot, temperature and leaf wetness duration, model, 336
—pink and gray snow mold, fungicide applications and timing, S132
Turina, M., S85
Turini, T. A., S85
Turkensteen, L. J., 382
Turner, N. E., 588
Tweddell, R. J., S85, S132
Tylenchulus semipenetrans, isothiocyanate sensitivity, laboratory assay, 747
Typhula spp.
—on cereals and grasses, DNA extraction, identification, S72
—on turf, damage assessment, S130
—on turfgrass and cereal, distribution in Wisconsin, S76
Tzanetakis, I. E., S32, S44, S85
Tzeng, K. C., S52, S53

Uddin, W., 336, S29, S86, S87, S112
Ueng, P., S124
Uhm, K.-H., 82
Ullman, D., S99, S115
Umaharan, P., 1153
Uncinula necator
—on grape: boscalid and pyraclostrobin sensitivity, in New York, S91; fungicide resistance in New York, isolate shifts, S90; humidity effect, 1137; ontogenic resistance, 547, 556; weather factors, S6
—triadimefon resistance, in California, S113
Uphoff, M. D., S66
Uppalapati, S. R., S86
Upper, C. D., 1082
Usall, J., 436
Ustilago spp., taxonomy, genetic analysis, 167
—*U. maydis*, adapter protein essential for virulence, analysis, S46
Utkhede, R., S86, S130
Uyemoto, J. K., S130

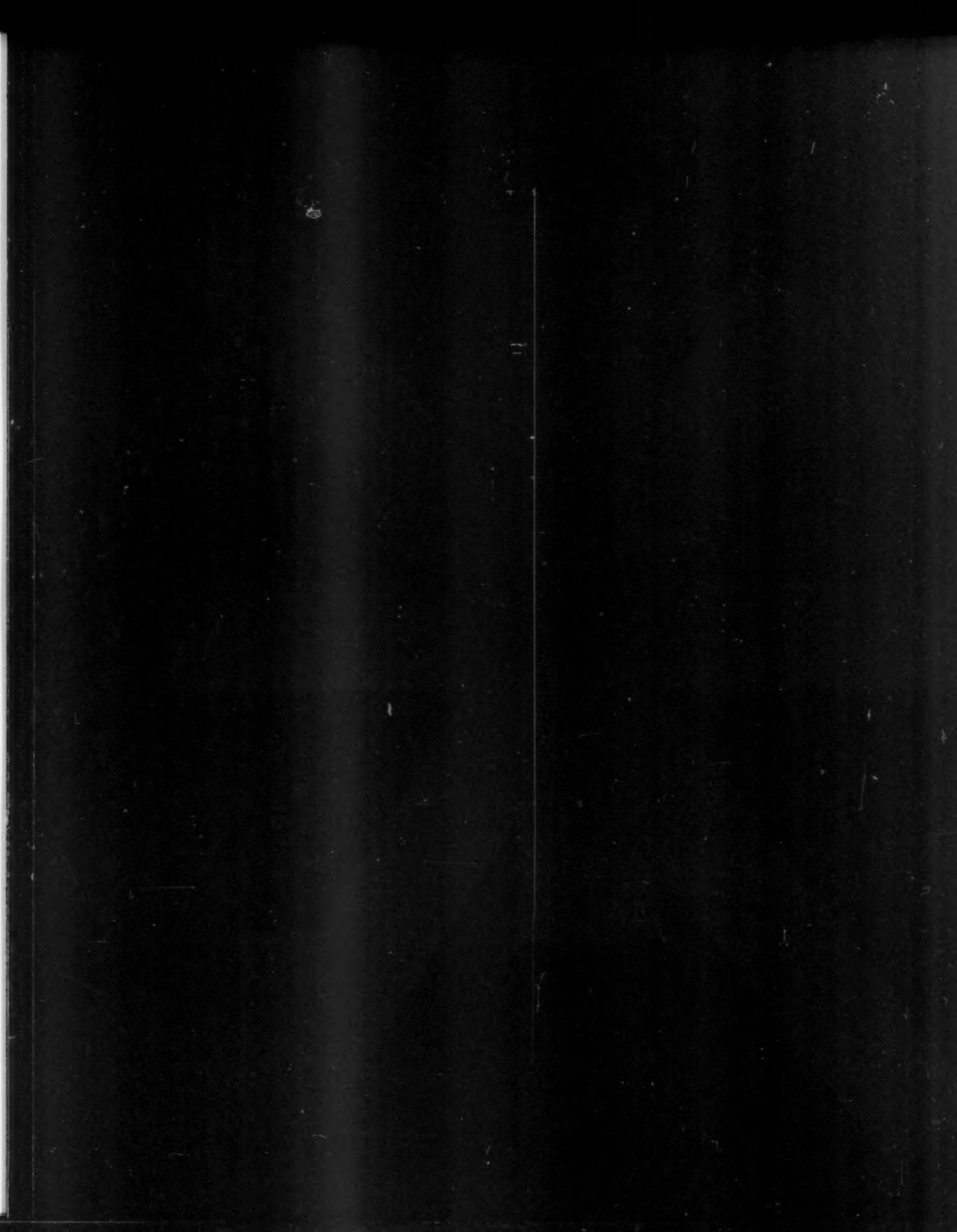
Vacha, J. L., S73
Vaghchipawala, Z., S105
Vail, S. S., S29
Vaillancourt, L., 1471, S26, S87, S111
Vale, F. X. R., 256
Valent, B., 1452
Valinsky, L., 1006
Valiunas, D., S124
Valkou, J., S92
Vallejo, I., S14
Vanachter, A. C. R. C., S52
Van Aelst-Bouma, R., S131
Van Alfen, N., S85
Vancauwenberge, J. E., S86
Vandemark, G. J., S86
van den Bosch, F., 616, 1329
van den Bosch, T. B. M., 382
van der Sluis, I., 626
Vande Voort, J. L., S86
van Es, H. M., 1131
Vani, A., S86
van Loon, L. C., 626, 666, 813
Van Sluys, M. A., S16
Vanstone, V. A., S36
Van Tuyl, S., S24
van Wijk, K. J., S15
Vargas, J. M., S112
Vasanthakumar, A., S87
Vásquez-Siller, L. M., S87
vdM Louw, S., S9
Vedam, V., S34
Vega-Sanchez, M. E., S87
Vegetable crops, biocontrol and fertilizer relation, S6
Vélez, H., S87
Venard, C., S87
Venturia inaequalis, on apple:
—field resistance, mapping, 493
—lesion-causing efficiency, S133
Vera Cruz, C. M., S53
Verdin, E., 644
Verhalen, L. M., S7
Verkley, G. J. M., S47
Verkooijen, J., 1360
Vernière, C. J., 832
Verticillium dahliae
—on crops and weeds in New Mexico, S14
—on crucifers, molecular types, 364
—on lettuce, survival in seeds and weeds, S127
—on potato, yield loss, S27
—wilt control by residues or lignin, S20
—in wood chip mulch, infectivity, S26
Vetten, H. J., S5
Vidaver, A. K., S2
Vieira Dos Santos, C., 451
Vigna unguiculata, hypocotyl rot, bioseed treatment, organic amendments, S17
Viji, G., 336, S29, S86, S87
Vikram, A., S72
Vikram, B. A., S55
Vilgalys, R. J., 610
Viñas, I., 436
Vincelli, P., 891, S87
Vinyard, B. T., S14
Viret, O., 316
Viruses
—begomoviruses, *Macroptilium lathyroides* and common bean, 774
—gene silencing, resistance signaling, S110
—mosaics on brome, tobacco, alfalfa, and panicum, *Tomato bushy stunt*, ribosome-inactivating proteins, 588
—on olive, detection with reverse transcription-PCR, 286
—using PCR group test primers, S34
—resistant durability, analysis, 941
—RNA, intraspecific recombination, methods, S27
—spherical ssRNA, phylogenetic analysis, S63
—tospoviruses: diversity, management and vectors, S115; emerging in USA, S115
Visker, M. H. P. W., 666
Vivanco, J. M., 588
Voisin, R., 160
von Broembsen, S. L., S68
Vossbrinck, C. R., S23, S133
Vovlas, N., 1093
Vujanovic, V., S132
Vuong, T. D., S17, S88

Wach, M. J., S44
Walcott, R. R., 528, S60, S88
Waldvogel, J. A., S119
Walgenbach, J., S115
Walker, N. R., S19, S62
Walkinshaw, C. H., S35, S68, S88
Walla, J. A., 1037, S88
Wallis, C., S100
Wallwork, H., S2
Wan, A., S10, S88
Wan, H. W., S52
Wan, J., S110
Wang, C., 1258
Wang, G.-L., S40, S41
Wang, H., S95
Wang, J., S97
Wang, K.-H., S88
Wang, N., S88
Wang, X. (China), 160
Wang, X. (North Carolina), S88
Wang, X.(Washington), S89
Wang, X.-J. (Virginia), S89
Wang, Y. H., S31
Wang, Z., S41
Wanner, L. A., S89
Warfield, C., S89, S122
Warren, K., S77, S108
Watermelon
—*Acidovorax avenae* on, seed infestation and blossom role, 528
—bacterial fruit blotch: biocontrol seed treatment, S60; control with plant defense activator, S37; detection seeds, S72
—gummy stem blight, azoxystrobin resistance, S113
—wilt, resistance quantification, S95
Watrin, C., S1
Wayadande, A., S64, S89
Webb, S. E., S89
Webber, J. F., S118
Webster, T. M., S58
Wedge, D. E., 46
Weeds, P. L., 176
Weeks, J. R., S32
Weestwood, J., S32
Wegulo, S. N., 513, 1285, S46

Weiland, G. E., S89
Welacky, T., S62
Welham, S. J., 657
Weller, D. M., 54, 982, S20, S58
Wen, G., 1258
Wen, K., S136
Wendel, L., S84
Wenner, N. G., S54, S81
West, D. R., S11
West, L., S89
Westphal, A., 1182
Weyant, R., 1240
Wharton, P. S., S90, S111
Wheat
—common bunt, resistance, crown and tissue comparison, S54
—cross with foxtail millet, *Magnaporthe grisea*, 42
—crown rot complex, management in Pacific Northwest, S125
—eyespot: genetic structure of pathogen population, Washington, 650; infection and thermal time, S10, S88
—Fusarium head blight, biocontrol agent, S17; biocontrol by *Lysobacter enzymogenes*, S93; epidemics and risk assessment models, 428; forecasting in Ohio, S53; incidence-severity relation, S23; multienvironment trial, inoculation comparison for resistance, 1068; previous crop effect, S75; resistance gene in substitution lines, S80
—*Fusarium*-infected kernels, deoxynivalenol and irrigation relation, S19
—*Gibberella zeae*, epidemic populations in Kansas and North Dakota, 874
—head blight: *Fusarium* spp., diversity, S3; species populations, S23; trait loci and pathogenicity, S19
—Karnal bunt, cultivar reaction, S29
—leaf and stripe rusts: durable resistance in CIMMYT, S112; resistence, gene markers, 881; resistance, molecular markers, 153
—leaf rust: resistance genes in Minnesota, S67; resistance transferred from *Triticum timopheevii*, 784
—powdery mildew, silicon effect, cytology, 402
—*Pythium oligandrum*, cell wall protein fraction effect, 1228
—*Pythium* spp. communities, in Washington, 867
—root diseases and direct seeding, S77
—root-lesion nematode, yield effect, S129
—rust resistance, wild relatives, S92
—Septoria leaf blotch and Fusarium head blight, tan spot, crop history, S60
—*Septoria tritici*: epidemic, weather models, 1329; leaf blotch, resistance, genetic mapping, S21; resistance gene, mapping, 1158
—soilborne pathogens, survey in Idaho, S81
—speckled snow mold, temperature and soil matric potential effect, S65
—stem and leaf rust, detection with PCR assays, S82
—stripe rust: control in Pacific Northwest, S16; resistant genes in Chile, S56
—tan spot: and leaf rust, management, S18; new races and one-to-one relation, diversity, 391; Ptr ToxA, host sensitivity, 397
Wheat soilborne mosaic virus
—resistance, strategy and analysis, S13
—soil environment effect on transmission, 1131
Wheat spindle streak mosaic virus, alternate hosts, ciliated protozoans, S13
Wheat streak mosaic virus
—coat protein gene for transformation, silenced transgenes for reactivation, S52
—population genetics and evolution, S99
—variation in isolates, S78
Wheeler, M. H., S90, *1606*
Wheeler, T. A., S48
White, D. G., S13, S46
White, L. A., 1240
Whittaker, R. G., S79
Wick, R. L., S134, S135
Wickizer, S. L., S40
Wicklow, D. T., S59
Widstrom, N., S42
Wigley, P. D., S11
Wilcox, W. F., 547, 1137, S28, S44, S60, S82, S90, S91
Wilhelm, K. P., S75
Wilk, D., S85
Wilke, A., S64
Wilkinson, H. T., S27
William, H. M., 881
William, M., 153, S112
Williams, R., S58, S78, S90
Willie, K., S84
Wilson, A. D., S90
Wilson, C. L., 344, 349
Wilson, C. R., 752, S71
Wilson, D. M., S42
Wilson, J. P., S42, S90
Wilson, L. L., S65
Wilson, M. A., S81
Windass, J., S67
Windels, C. E., S90
Windom, G. E., S127
Wing, R., S40
Winter, S., S5
Wintermantel, W. M., S85, S101
Winton, L. M., 121
Wipf-Scheibel, C., 1478
Wise, R. P., S32
Wisler, G. C., S101
Wisniewski, M., 344
Witherell, R. A., S67
Wolf, H. C., S90
Wolf, T. K., S7
Woloshuk, C. P., S9, S97
Wong, F. P., S90, S91, S111, S114
Wong, M.-Y., S91
Wood
—pathogens imported on, movement pathways, S119
—pests transported by, mitigation, S119
—products, phytosanitary measures, international, S119
Wood, B. W., S66, S73
Wood chip mulch, tree pathogen survival in, S47
Wood, D. A., S16
Wood decay, mycosymbionts, wood wasps, S90
Wood importation, exotic fungal pathogen introduction, S118
Wood, D. W., S108
Woods, S., 167
Woody, S. T., S91
Workneh, F., 901
Wu, B. M., S70, S91, S131, 1572
Wu, C. X., 959, S57
Wubben, M. J. E., S91
Wyenandt, C. A., S91

Xanthomonas spp.
—*X. arboricola*, on prune, putative protein, ATP-binding system, S68
—*X. axonopodis*: on citrus, pathogenicity, virulence, and profiles, S5; on citrus, phytosanitary measures, standards, S12; on citrus, symptoms in tissues, 832; on citrus, wind-blown spray, sample techniques, S70; genetic variation, S21
—*X. campestris*: on bean, races in Nicaragua, Costa Rica, and Puerto Rico, S93; on cotton, cover photo, October; on cotton, phyllosphre inoculation technique, 1204; on lettuce, genetic diversity in bacteria, 596; on lettuce, strain diversity, 64; on onion, resistance screening, S29; on pepper, bactericide evaluation, S21; on pepper, systemic resistance, defense-related genes and oxidative burst, S38; on pulse and weeds, population dynamics, S29; on tomato, new races and mutagenesis, S62; on tomato, race 3, bacteriocins, 1415; on zinnia, cercosporin degradation, regulators and enzymes, S82
—*X. citri*: on citrus, PCR for detection, in Thailand, S50
—*X. cucurbitae*, on pumpkin, seed treatment, S134
—*X. oryzae*: genetic variation detection, AFLP fingerprinting, S43; on rice, new race in Korea, S66; on rice, resistance and gene mapping, 1258; on rice, resistance inheritance, 147; on rice, strain antagonistic interactions, 705; on rice, variation and resistant gene, S53
—*X. translucens*, on cereals, DNA polymorphism, Russia, S38
Xiao, C. L., S92
Xiphinema spp., on grape, ribosomal genes and specific primers, identification by, 160
Xu, H., S92
Xu, R., 1407
Xu, X. (China), 1258
Xu, X. M. (U.K.), S92
Xue, A. G., 329
Xylella fastidiosa
—biofilm formation and colony size, nutrition effect, S50
—on citrus: geographic genetic structure, Brazil, 28; sharpshooter transmission, S19
—fimbriae produced by, cover photo, June
—on grape: detection using xylem fluid, S8; exopolysaccharide production, S74; fimbrial genes, site-directed, 675; genomic characterization, S16; inoculation date effect, 244; sharpshooter feeding behavior, S6
—on grape and citrus, detection methods, S25
—hydrophobicity and biofilm, S50
—mutants, triparental matings, S51
—on plum, coffee, and citrus, colonization and symptom comparison, S4
—on sweet orange, fruit, seeds, and transmission to seedlings, 953
—on sycamore, temperature effect, S34
—taxonomy, S76
—on tobacco, colonization patterns, S4
—transformation, RSF1010 derivative plasmids, S31

Yahyaoui, A. H., 391, S92
Yamada, T., S102
Yamagishi, N., 1560
Yamamoto, H., 768
Yan, F., S6
Yandoc, C., S75, S92
Yang, J. (Canada), S45
Yang, J.-S. (China), 112
Yang, M. S., S45, S69
Yang, R.-C., 633
Yang, X. B., 758, 901, S51, S65, S66, S71, S92, S103, S104
Yang, Y., S60, S73, S95
Yao, J., S4, S93
Yap, M.-N., S93
Yates, D., S3
Ye, T. Z., 633
Yee, D., 1533
Yeh, F. C., 633
Yeh, S.-D., 112

Yin, B., 1006
Ying, Z., S71
Yoder, K. S., S114
Yorinori, J. T., S103
Yoshimura, M. A., S56
Young, D. D., S67
Young, I. M., 1111
Ypema, H., S54
Ytterberg, A. J., S15
Yu, Q., 1124
Yu, T.-A., 112
Yuan, C. Y., S93
Yuen, G. Y., 1103, S51, S93
Yurgel, S., S77, S108

Zaffarano, P. L., S53
Zala, M., S53
Zambino, P. J., S33, S73, S74
Zanzot, J. W., S93
Zapata, M., S75, S93
Zarnoch, S. J., S68
Zasada, I. A., 747, S93
Zavriev, S. K., S34
Zee, F. T., 1124, S43
Zeigler, R., S54, S110, S121
Zeller, K. A., 853, 874, S39, S93
Zeller, W., S2
Zemetra, R. S., S52
Zettler, F. W., S119
Zhang, C., S94
Zhang, D., 1258, S94
Zhang, H., S33
Zhang, J. (Ohio), 64
Zhang, J. X. (Florida), S94
Zhang, Q., 1240, S94
Zhang, S., S94
Zhang, W., S94
Zhang, Y., S94
Zhao, B., S94
Zhao, T., S95
Zhao, Y., S32, S49, S95
Zheng, C., S95
Zheng, Q., S71
Zhexembekova, M., S95
Zhong, S., 604
Zhou, B., S40
Zhou, X. (Arkansas), S60, S95
Zhou, X. G. (Maryland), S95
Zhu, S., 860
Zhu, X. Q., S31
Zidack, N. K., S7, S117
Ziems, A. D., S95
Zilberstaine, M., 356, 931
Zingiber officinale, bacterial wilt, molecular diversity in Hawaii, 1124
Zitter, T. A., S27, S134
Zreik, L., 644
Zucchini yellow mosaic virus, symptom severity and relative fitness loss, 1478
zum Felde, A., S96